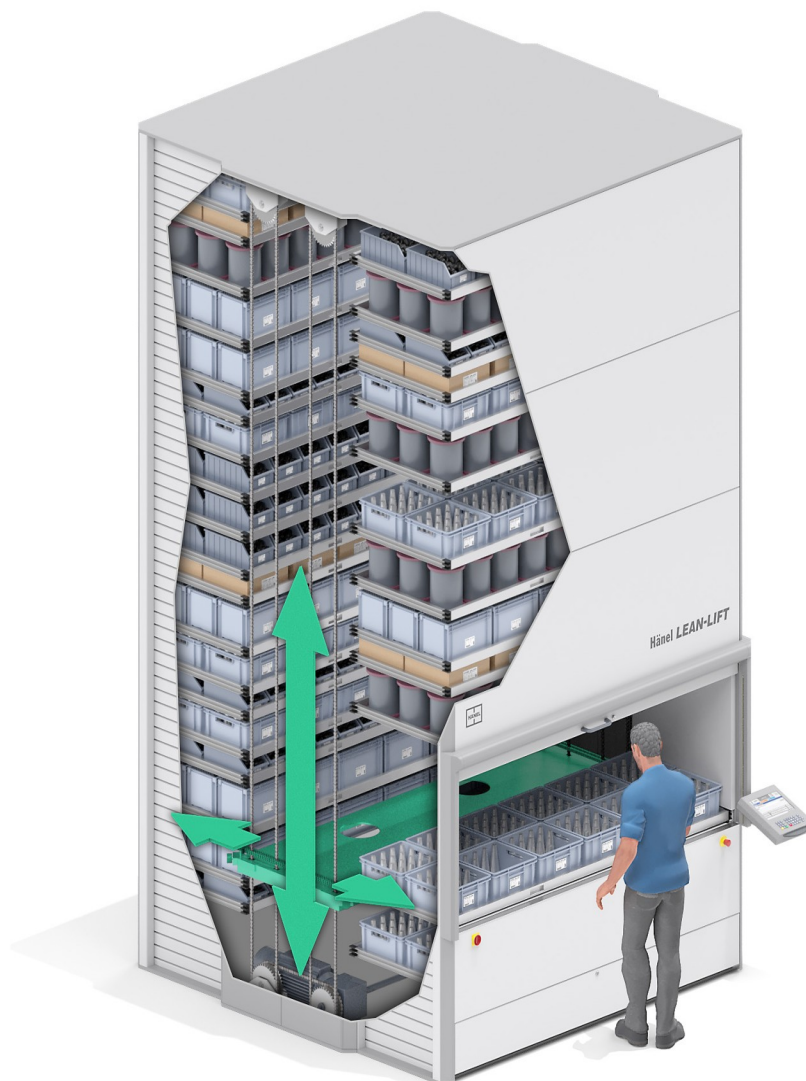




Installation Instructions Hänel Lean-Lift - lift types 840 to 3260 - Original Installation Instructions -



Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

Contents

Note:

A separate table of contents is provided at the beginning of each chapter containing multiple subchapters.

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Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

0 Guide

Contents

This section contains basic information about this manual. Follow the instructions in order to prevent errors when installing the Hänel Lean-Lift. It is particularly important that you note the meaning of the symbols for the safety instructions and follow the corresponding instructions exactly. By doing so, you prevent possible accidents and the associated risk of injuries and property damage.

Target group for these Installation Instructions

These Installation Instructions are intended for specially trained and authorised technicians employed by the Hänel factory or by Hänel representatives.

Table of contents

In addition to the main table of contents, any chapter containing multiple subchapters has a separate table of contents located at its beginning.

Illustrations

The illustrations used are examples of a possible lift version.

Classifying the signal words and warning colours used

The signal words and colours used have the following meanings:

Signal word and colour	Meaning
(Warning sign)  • Safety instruction • Preventive measure	High risk of danger Safety alert symbol with the keyword "DANGER". High risk, warning of fatal injuries in the event that instructions/requirements are not observed. White text on red background. A specific symbol to explain the danger appears in the box to the left.
(Warning sign)  • Safety instruction • Preventive measure	Moderate risk of danger Safety alert symbol with the keyword "WARNING". Moderate risk, warning of possible severe to fatal injuries in the event that instructions/requirements are not observed. Black text on orange background. A specific symbol to explain the danger appears in the box to the left.

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

0 Guide (continued)

Signal word and colour	Meaning
(Warning sign)  • Safety instruction • Preventive measure	Low risk of danger Safety alert symbol with the keyword "CAUTION". Low risk, warning of possible minor to moderate injuries in the event that instructions/requirements are not observed. Black text on yellow background. A specific symbol to explain the danger appears in the box to the left.
(Mandatory instruction sign)  • Safety-related instructions and safety-compliant workflows	Safety instructions Keyword "SAFETY INSTRUCTIONS" Instruction for safe work. White text on green background. A specific mandatory instruction symbol may appear which explains the specific safety measure.

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

0 Guide (continued)

Warning symbols and signal words used

Symbols	Meaning
	This symbol informs you that the following are prohibited: • Entering the lift via the access point • Sitting or standing inside the access point or underneath the unsecured extractor • Riding on the extractor
	This symbol informs you that the following are prohibited: • Leaning into the lift • Reaching into the lift through an open service door • Sitting, standing or walking inside the lift
	Notes with this symbol warn you of possible general hazards.
	Notes with this symbol warn you of a hazard caused by electrical current.
	Notes with this symbol warn you of a hazard caused by suspended loads that can fall a bit or even crash to the ground, and particularly of the extractor falling.
	Notes with this symbol warn you of a crushing hazard caused by moving machine parts.
	Notes with this symbol warn you of a hazard caused by being pulled in or grasped by moving machine parts.
	Notes with this symbol warn you of a hazard caused by parts that tip over.
	Notes with this symbol warn you of a hazard caused by falling.

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

0 Guide (continued)

Warning symbols and signal words used (continued)

Symbols	Meaning
	Notes with this symbol warn you of hand injuries caused by moving machine parts (crushing, cutting, etc.).
	Notes with this symbol warn you of a hazard caused by hot surfaces.
	Notes with this symbol warn you of a hazard caused by: • Storing explosive materials in the lift • Storing these materials in the area surrounding the lift • Development of explosive atmospheres.
	Notes with this symbol warn you of a hazard caused by hazardous materials, particularly aggressive or corrosive media.
	Notes with this symbol warn you of a hazard caused by machine movements triggered automatically.
	Notes with this symbol warn you of a hazard caused by the risk of damage to the stored articles due to static electricity.
	Secure the main switch! This symbol informs you that, before beginning a task, you must switch off the main switch and secure it from being switched on again using a personal padlock.
	Secure the actuator / actuating magnet! This symbol informs you that, before beginning a task, you must lock a personal padlock onto the actuator / actuating magnet of the open service door to keep it from closing.
	

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

0 Guide (continued)

Warning symbols and signal words used (continued)

Symbols	Meaning
	Wear fall protection equipment! This symbol informs you that, before beginning a task at great heights, you must put on fall protection equipment as personal safety equipment (PSE) against falling.
	Wear safety gear! This symbol informs you that when hazards from falling parts exist, you must wear personal safety equipment.
	See operating manual! This symbol informs you that the operating manual contains safety-related information <u>for instructed and specially trained and authorised personnel</u> (such as Hänel after-sales service) that must be observed.
	Note The word "Note" marks important information that absolutely must be followed. Note: The word "Observe:" marks additional information to help to prevent errors.
	Disposal This symbol indicates that applicable national laws and regulations for the disposal of recyclable materials must be followed.

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

1 Basic information

Contents

This chapter provides basic information about the Hänel Lean-Lift.

Manufacturer

Hänel Büro- und Lagersysteme

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Phone: +49 7136 27725

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Internet: www.haenel.de

Scope of validity of the Installation Instructions

These Installation Instructions are valid for lifts of the following series:

Type: Hänel Lean-Lift - lift types 840 to 3260

Drives: 2

Access points: according to order confirmation

The lift type and drive data must match the specification on the type plate. You will find the type plate at the first access point.

Date of issue of the Installation Instructions

July 2024

Important notes before beginning work

Before the installation begins, the requirements of the pertinent "Installation Requirements for the Owner/Operator" document must be fulfilled. This must be verified; refer particularly to the instructions in Chapter 4, "Preparing for installation".

Keep in an accessible place as a complete document

- These Installation Instructions are a part of the lift and must be stored in an accessible location at all times, even after the installation work is completed.
- Pages may never be removed from these Installation Instructions. If the Installation Instructions or any of its pages are lost or missing, particularly the section entitled "Safety instructions", they must be replaced immediately.

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All other rights reserved.

Change service

This documentation is not subject to the change service of the manufacturer. Changes to this documentation may be made without further notification.

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

1 Basic information (continued)

Supporting documents

The following individual documents are included in the documentation of the Hänel Lean-Lift:

Title of the manual or document	Target group of the manual/document
Hänel Lean-Lift Operating Manual	Supervisors and technicians
Hänel Lean-Lift User Guide	Supervisors and operating personnel
Hänel Lean-Lift Installation Requirements for the Owner/operator	Hänel sales persons, supervisors and technicians employed by the operator, specially trained and authorised technicians employed by the Hänel factory or by Hänel representatives.
Hänel Lean-Lift Installation Instructions	Specially trained and authorised technicians employed by the Hänel factory or by Hänel representatives.
User Guide for the Microprocessor Control System MP Lean-Lift	Supervisors and operating personnel
Technical Description of the Microprocessor Control System MP Lean-Lift, Multi-Space and Rotomat	Technicians
Operating Manual "Remote-controlled Lift Operation with MP"	Supervisors and operating personnel
Operating Manual "Remote-controlled Lift Operation with MP and Automatic Container Extractor"	Supervisors and operating personnel
Additional documents	File name
Memorandum for Technical Field Service	SiCHA
Training auxiliary personnel for technical outside sales	SichHK
List of Special Checkpoints	montf-II
Checklist for Safety Signs	SiSchi-LL
Safety Inspection Log	F-SichB3
Supplementary Installation Instructions in the Annex (depending on the lift version)	File name
Installation of Lean-Lift Sealing	INST-LL-SEAL
Installation of Lean-Lift Unstacking	INST-LL-DECREASE
Installation of Lean-Lift Stacking	INST-LL-INCREASE
Installation for Lifts Designed for Earthquake-prone Areas	INST-LL-EB
Installation for Special Distribution of the Panels	INST-LL-WALL
Floor anchoring provided by owner/operator	INST-LL-FIXFLOOR
Floor anchorage system provided by the owner/operator for Eurocode 8 Germany	INST-LL-FIX
Documents annexed to the installation instructions (depending on the lift version)	File name
Screw list	(refer to the machine documentation).
Installation/Setting Instructions According to Overview List	LL-ALLEB_
Instructions for Antistatic Version	ESTATIC1

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

1 Basic information (continued)

Informational notes

A number of structural components have tags or white notes attached that contain important information.

It is absolutely essential that you read and follow these notes, as they help you to avoid common installation mistakes.

Remove the notes before the installation.

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

2 Personnel requirements

Contents

Overview of the qualifications required of the necessary personnel.

Installation personnel

The installation personnel must meet the following mandatory requirements:

- The installation personnel must have completed a qualifying examination, or comparable examination in the country of use, in the field of mechanical or electrical engineering.
- They must be able to provide evidence of having received adequate training in all matters related to technical support of the lift and its safe handling, as well as regular annual follow-up training, from the manufacturer.
- They must have sufficient knowledge of the language of the country of use.

If these requirements are not in place, the work must not be carried out or must be cancelled if it has begun already.

Auxiliary personnel

The owner/operator is solely responsible for selecting any auxiliary personnel to be used. It is mandatory that the auxiliary personnel used fulfil the following requirements:

- The auxiliary personnel have to be suitable for the task they are used in, adequately instructed, and demonstrably capable of using the respective equipment (e.g. powered auxiliary equipment).
- The auxiliary personnel have to be equipped with the required personal safety equipment and familiar with its proper use.
- The auxiliary personnel must be sufficiently proficient in the language of the country of use.
- The auxiliary personnel must be able to follow the instructions of the installation personnel.
- The auxiliary personnel have to be available to the installation personnel without any interruption.

If these requirements are not present according to the discretion of Hänel or its representative, the work may not be carried out or must be interrupted.

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

3 Safety instructions

Contents

This chapter provides important instructions intended to protect the installation personnel, auxiliary personnel and (where applicable) third parties from injury or damage and to prevent property damage.

Important notes before beginning work

Before the installation begins, the requirements of the pertinent "Installation Requirements for the Owner/Operator" document must be fulfilled. This must be verified; refer particularly to the instructions in Chapter 4, "Preparing for installation".

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Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

3 Safety instructions (continued)

3.1 Safety during installation

The owner/operator is responsible for clarifying the internal company regulations for installation, operation and maintenance. Before work begins, the installers and auxiliary personnel have to be informed about all internal company regulations relevant to installation.

3.2 Safety of the installation area

For safe installation, the owner/operator must provide a sufficiently large installation area - see corresponding document "Installation Requirements for the Owner/operator". Only installation personnel and authorised auxiliary personnel may access this installation area.

Before work begins, the owner/operator must coordinate with the installation personnel to ensure that the installation area is visibly cordoned off to prevent risk of accident—particularly due to falling or overturning parts of the lift—and prevent access for unauthorised persons.

Parts lifted using lifting gear must always be secured against falling down or falling over.

3.3 For new buildings / shell construction

The installation work may proceed only after removing any construction dirt present.

During installation, the owner/operator must protect the installation area and lift parts in temporary storage from dirt.

If, despite this, the installation area or lift parts are contaminated with construction dirt, the dirt must be removed completely before installation continues.

The installation area must be heatable.

3.4 Personal safety equipment

The respective national regulations apply.

In particular, for installation personnel and auxiliary personnel, the following are required in accordance with rules:

- Safety shoes and a safety helmet with chin guard to protect against falling parts,
- safety glasses if necessary,
- protective gloves as protection against injuries from corners and edges and as protection from burns on hot drive parts,
- Personal safety equipment against falling (restraint/fall arrest system) for all work at great heights,
- 2 padlocks per lift (installation personnel only).

SAFETY INSTRUCTIONS



Use necessary safety equipment!

Work may be carried out with the required personal safety equipment (e.g. safety shoes, safety helmet with chin strap, protective gloves etc.).



The owner/operator must provide the required personal safety equipment for auxiliary personnel!

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

3 Safety instructions (continued)

3.5 Work at heights

Work at a great height must only be carried out by personnel specially trained and authorised for this purpose.

3.5.1 Personal protection when using a raised working platform or scaffolding

Only a raised working platform or scaffolding is permitted as auxiliary equipment for work at great heights. The workers must not leave the platform or scaffolding when carrying out installation work at a great height.

When using a raised working platform, it is mandatory to use the personal safety equipment against falling (suitable restraint system) and the attachment points in accordance with the manufacturer's operating manual for the raised working platform and to observe the safety instructions and notes included there.

When using scaffolding, the personal protection against falling is provided by the existing railing or according to the manufacturer's operating manual.

3.5.2 Personal protection at insufficiently secured fall-risk zones

For work on insufficiently secured fall-risk zones (when transporting lift parts and for lift installation in a recessed pit or through multiple storeys), the owner/operator or its safety officer must provide or create inspected and permitted attachment points for personal protection (for European Union: see EN 795). For these attachment points the owner/operator must provide a test log from a person qualified for this or the approval of a structural engineer.

When carrying out such work, suitable personal safety equipment against falling must be used (depending on the height, e.g. a suitable restraint system or fall arrest system with deceleration device).

For proper use of the personal safety equipment, please observe the specifications and instructions from the respective manufacturer.

The owner/operator must block off the area around an insufficiently secured fall-risk zone to prevent access by unsecured personnel.

SAFETY INSTRUCTIONS



Second person required for work at heights!

Individual personnel must not carry out work at heights alone. It is mandatory to find a second trained person to watch during the entire duration of the work at heights and help immediately in the event of an emergency.

Note:

Outside Europe, the corresponding laws, standards and accident prevention regulations for work at heights and for fall protection equipment apply.

SAFETY INSTRUCTIONS



Wear fall protection equipment!

Therefore the safety rope of the fall protection equipment must be attached to a point outside of the lift that is permitted and suitable for the respective work.

Note:

Outside Europe, the corresponding laws, standards and accident prevention regulations for work at heights and for fall protection equipment apply.

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

3 Safety instructions (continued)

3.6 Modifying the Lean-Lift

Modifications are permitted only after drafting and release of a trained safety concept by the Hänel production plant and may be carried out only by personnel who are specially trained and authorised by the manufacturer, and who have a sufficient Hänel certification level.

The consequences of an unauthorised modification and/or modification by personnel who are not (or not sufficiently) trained and certified by the manufacturer, Hänel:

All safety warranties and certifications shall be rendered null and void. These are:

- a) the ETL label for the USA/Canada,
- b) the EU Declaration of Conformity for the European Economic Area.

All warranty claims towards the manufacturer Hänel arising from faulty modification shall be null and void. Hänel shall no longer be responsible for the new safety concept.

The party carrying out the modification must draft a new safety assessment process and safety concept in accordance with EN-ISO 12100. All country-specific legal regulations or product standards, as well as country-specific obligations for retrofit must be taken into account by the party carrying out the modification. For the European Economic Area, these are the EC Machinery Directive, documented by the EC Declaration of Conformity and product standard EN 15095. This modification would then be carried out under the sole responsibility and at the sole risk of the company carrying out the modification and the owner/operator without the technical knowledge of the manufacturer.



! DANGER

Risk of fatal injury incurred by unauthorised modification!

- Any modification without the proper approval of the manufacturer is prohibited.
- There is a risk of fatal injury in case of insufficient technical knowledge or following improper procedure!

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

3 Safety instructions (continued)

3.7 Working inside the lift

Who is authorised to work inside the lift?

All of this work must be carried out by authorised and trained technical personnel. These technicians must demonstrate sufficient qualifications for carrying out this task. In particular, for safety reasons, work on the drives may only be carried out by specially trained and authorised technical personnel (such as Hänel installation personnel/after-sales service).

Accident prevention regulations

For all work, the legal accident prevention regulations applicable to the respective country of use always have overriding authority. Furthermore, the owner/operator may have additional special regulations that also have to be taken into consideration.

Required padlocks

You need at least two padlocks for all service and maintenance tasks. For security reasons, you may only use individual locks to which only you have the keys.



Secure the main switch!

Turn the main switch to the "0" position and secure it from being switched on again using a padlock.



Secure the actuator / actuating magnet!

Lock a padlock onto the actuator / actuating magnet of the safety switch on the service door so that it is impossible to close the door.



General safety measures for all work inside the lift

Various tasks in the inside of the lift are associated with a substantial risk of accident. This primarily involves the danger of falling for persons, stored articles or the extractor.



! DANGER

Therefore, the following steps are always required whenever you work inside the lift:

- Before beginning work, move the container out of the extractor if possible.
- Wear personal safety equipment (PSE) as described under 3.4.
- Before the work begins, lower the extractor all the way to the ground if possible, as otherwise it can fall.



Service work on and repairs to the extractor as well as work on the drives may be carried out only after the extractor has been removed. If it is not possible to lower the extractor to the ground, secure it as described in the Hänel Lean-Lift Operating Manual.

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

3 Safety instructions (continued)



DANGER

Risk of fatal injury from electric current!

Do not operate the lift if any structural components or their housings are open or damaged. If opening is necessary to replace electrical components (e.g. frequency converter U1 or evaluation unit B1 of the height detection system), you first have to switch off the main switch and observe the safety instructions.

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

3 Safety instructions (continued)

3.8 Working inside the lift - lifts in multi-unit networks

Workplace safety regulations to be observed for lifts in a multi-unit network.



! DANGER

For lifts in multi-unit networks, hazardous voltage is still present at the following components even when the main switches are switched off:

- Main switches and protective motor switches
- Terminal strip X1 and/or X2 in the electrical drawer (see circuit diagram)
- on the safety switch of the service door.

SAFETY INSTRUCTIONS



Switch off the main switches!

After the service door is opened, the main switches on the individual lifts switch off automatically.

If this malfunctions, it may be repaired by specially trained and authorised technical personnel (such as Hänel installation personnel/after-sales service) only.

Always follow any applicable national laws and regulations!

Before entering the inside of the lift, check that all the main switches have switched off automatically and cannot be switched on again. All the lifts that persons are working on or are inside of must be secured against being switched on again using a padlock. All the other lifts must also be checked, and their main switches secured against being switched on again using a padlock. Alternatively, you can also disconnect these lifts from the mains power connection.

SAFETY INSTRUCTIONS



Secure the actuator / actuating magnet!

When the service door is opened, all the lifts come to a halt.

Secure the actuator / actuating magnet of the safety switch with a padlock if you have opened the service door. In this way, none of the lifts can be put into operation.



For a multi-unit network with 2 service doors, you must secure each service door using a padlock.

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

3 Safety instructions (continued)

Service access doors for all lifts

All lifts have a shared service access door. The service door on the outermost lift provides shared access to all the lifts. Optionally, a multi-unit network is also available with 2 service doors.

The individual lifts are interconnected via inside passages.



! DANGER

Securing the extractor

During work on an inside lift, every extractor under which you work or move must be either lowered all the way to ground level or secured against falling. When doing so, start with the extractor at the service door.

For information on how to secure the extractors, see the Hänel Lean-Lift Operating Manual.

After completing the installation work

Check that all main switches on the individual lifts have switched off automatically and cannot be switched on again after opening the service door.

Then, switch the main switches of the individual lifts back on.



Note

Work inside the lift may only be carried out by specially trained and authorised technicians (such as Hänel installation personnel/after-sales service).

The main switches have to be in position "0"

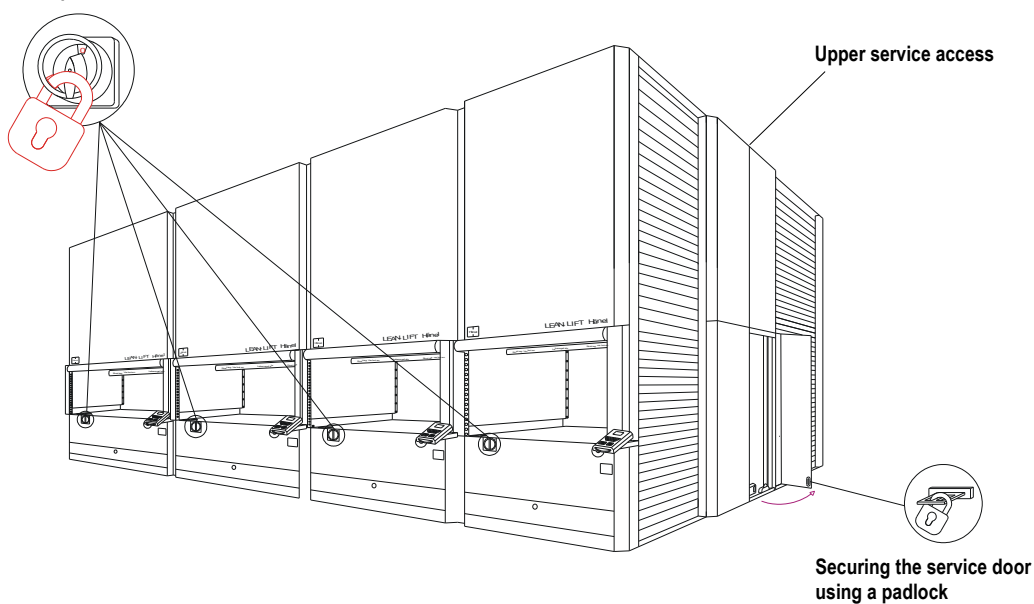


Fig. 1: Lifts in multi-unit networks

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

4 Preparing for installation

Contents

This chapter describes the process of preparing the installation location and verifying whether the owner/operator has properly carried out the necessary preparation tasks.

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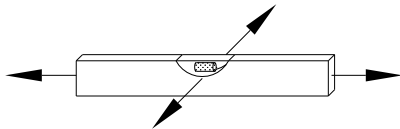
4 Preparing for installation (continued)

4.1 Checking the erection location

Checking the substrate

Check the installation location before the installation work begins. The floor at the erection location of the lift must be flat, solid (i.e. rigid) and level as determined by a spirit level. For unevenness of the floor, the limit values apply in accordance with DIN 18202, Table 3: "Level tolerances", row 2:

Measuring point distance	max. flatness deviation
1 m [39.37 in]	8 mm [0.31 in]
4 m [157.48 in]	12 mm [0.47 in]
10 m [393.70 in]	15 mm [0.59 in]
15 m [590.55 in]	20 mm [0.79 in]



DANGER

Poor quality substrates cause a substantial risk of injury, including fatal injury.

Erection of the lift is not permitted under the following conditions:

- On floating or cast plaster floor (due to its insufficient load carrying capacity)
- On magnesium oxychloride cement (due to corrosion of the housing)
- If the level tolerances of the floor are exceeded.

Note

- For floor anchoring or a floor anchorage system provided by the owner/operator: The suitability of the foundation for installing the respective anchor must be checked and confirmed by a structural engineer provided by the owner/operator (refer to the "INST-LL-FIXFLOOR" and/or "INST-LL-FIX" supplementary installation instructions).
- Have the customer reconfirm the correct position and location of the lift.
- If the floor is so uneven that it is impossible to compensate for the unevenness, installation must be stopped.



Remedial work

If it becomes evident that the substrate does not meet the standards, the owner/operator shall be responsible for its remediation.

Likewise, if other deficiencies in the preparation tasks of the owner/operator are found (see Installation Requirements for the Owner/Operator), they must remedy the deficiencies before you may begin installation.

4.2 Safety

You must follow any applicable special regulations of your country during installation. Before beginning work, the installer must obtain information from the customer or owner/operator about the special operating and safety instructions, as well as new or revised regulations.

4.3 Completeness of the documentation

Ensure that all of the supporting documents (see Chapter 1) are present and complete, as you will need them for installation.

In particular, observe the documents

- "Installation Requirements for the Owner/Operator"
- "Operating Manual" and
- "List of Special Checkpoints"

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation

Contents

This chapter describes the installation of the Lean-Lift. The following instructions must be followed exactly to ensure safe and correct installation.

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Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

5.1 Scope of delivery

Observe the "Checklist for Assembly/Installation" and the order confirmation of the lift. These documents provide information on the scope of delivery etc.

Screw packages:

The screws used in the installation instructions are included in the single parts or grouped into screw packages in the screw list. To avoid confusion, the screw packages are specified in the Installation Instructions. This abbreviation is used:

SPx = Screw package number x (x = 1 - n)

Small parts box:

Miscellaneous small parts (e.g. rollers, container limit stop, clamping bracket for ribbon cable, centring mandrel for transporter, etc.) are packaged separately in a box. To avoid confusion, this small parts box is specified in the Installation Instructions. This abbreviation is used:

KK = Small parts box

Illustrations:

The illustrations used are examples of a possible lift version.

5.2 Required tools and auxiliary equipment

The tools needed for the installation can be taken from the "Bill of Materials - Tools for Installers" (WKZ-MO) or the "Bill of Materials - Tools for Installation and Service" (WKZ-MS).

Prepare an adequate number of shims (SP 5).

5.3 Carrying out installation

Have the requirements been verified?

Make sure to conduct a thorough review to verify that the installation requirements have been fulfilled (see Chapter 4) and follow the safety instructions.

SAFETY INSTRUCTIONS

There is a risk of fatal injury if the installation requirements are not fulfilled

If safety during installation cannot be guaranteed, installation must stop and these deficiencies corrected before it resumes.

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

5.3.1 Installing the bottom frame

Step	Task	Important note/illustration
1	Place the bottom frame exactly at the location where you will erect the lift. The lift number stamped into the front side of the frame ("XX", see Fig. 2) must be pointing in the direction of the access point.	 Note - Have the customer reconfirm the correct position and location of the lift. - The base is in two pieces. Fit the two drive chains provided on the chain wheels and screw the two frame parts together with socket head cap screws DIN 912 / ISO 4762-M16x40 and spring washers DIN 127-A16. The spring of the chain joint has to face towards the centre of the lift (also refer to the Installation Instructions for "Chain Joint Installation" 99900004 for more information). - For lifts with spiral cables (lift height <8.5 m (334.65 in)), you must still secure the longitudinal brace in the centre of the lift with 2 cylinder screws DIN 912 / ISO 4762-10x20 and washers DIN 125 / ISO 7089-10. - The arrangement of the bottom frame regarding the alignment of the vertical drives for lifts in multi-unit networks can be found in the Installation Instructions for "Spiral Cable" (LL-SPIRA) and "Cable Carrier for Unit Height > 8.5 m (334.65") (LL-SCHLE).
2	Make the entire frame construction level with a level and with the help of the adjusting screws DIN 912 / ISO 4762-M20x50. When doing so, start at the highest point of the floor that makes contact with the frame. This point is the zero point of the frame.	Note: - The alignment of the base has to be checked again upon inspection of the extractor holding position (Chapter 5.3.30) and corrected if necessary. - With lifts with transporters, Chapter 5.3.26-C4 is to be followed.
3	If necessary, the rectangular tubes and the points at which the drive and chain wheels are located must be steadied with rustproof shims of a corresponding thickness (see SP 5) as shown in Fig. 2 so that they do not move, lie flat on the ground and the lower frame is unable to sway during lift operation. Size of the shims: 100x100x1.5 mm (3.94x3.94x0.06 in). If necessary, stack multiple shims. Ensure that the shims do not protrude beyond the outer edges of the bottom frame.	 Note - If shims are missing or incorrect, the side parts will settle after being loaded. This causes the extractor to tilt thus leading to positioning errors. - Therefore, careful installation of the shims and levelling are fundamental to the entire construction and the proper function of the Lean-Lift.
4	Be certain to loosen the DIN 912 / ISO 4762 M20x50 adjusting screws after levelling.	

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

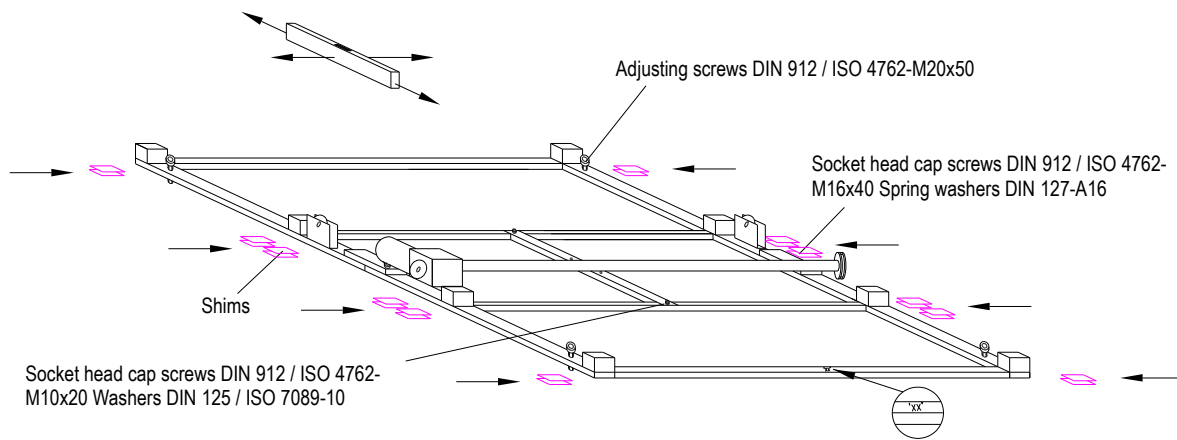


Fig. 2: Installing the bottom frame

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

5.3.2 Removing the vertical shaft

Step	Task	Important note/illustration
		Note: • If it is necessary to move into the lift with a raised working platform, then the vertical shaft on the base first has to be removed for lift types with type depths 635 and 825. • With type depths 1047 and 1270, the vertical drive and the vertical shaft are not preassembled at the factory.
1	Release and remove the 2 socket head cap screws DIN 6912-M16x30 (40) of the bearing block [1] (see Fig. 3). Also remove the drive chain on this side.	
2	On the motor side, place a squared timber under the drive shaft [2] so that it does not fall over and fall down (see Fig. 3).	
3	Unscrew all tensioning screws DIN 912 / ISO 4762-M6x25-12.9 of the shaft clamping set [4] and screw the screws into the forcing thread of the shaft clamping set (see Fig. 3).	Note Disassembling the shaft clamping set in case of repair: The extractor has to be secured according to the operating manual (MANL-LL).
4	Then, remove the screws from the forcing threads.	
5	Pull the shaft clamping set [4] and the coupling element [3] onto the vertical shaft [2] and place the vertical shaft onto the squared timber.	
6	The vertical shaft [2] incl. bearing block [1] can now be removed by pulling it upwards.	Note: Store the shaft and bearing block so that the front side of the bearing block is at a 90° angle to the shaft axis.
7	The installation of the shaft clamping set is done in reverse order. The distance measurement X is as follows, depending on lift type: • ES - type 250 / type 500: 22 mm (0.87 in) - type 700 / type 1000: 20 mm (0.79 in) • HS - all lift types: 20 mm (0.79 in) Using a torque wrench, tighten the screws of the shaft clamping set in diagonally opposite sequence. The tightening torque of the tensioning screws is 17 Nm (12.54 ft-lb).	Note: The shaft must be reinstalled by following the reverse order of steps no later than the time at which the extractor is installed; see Chapter 5.3.17.

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

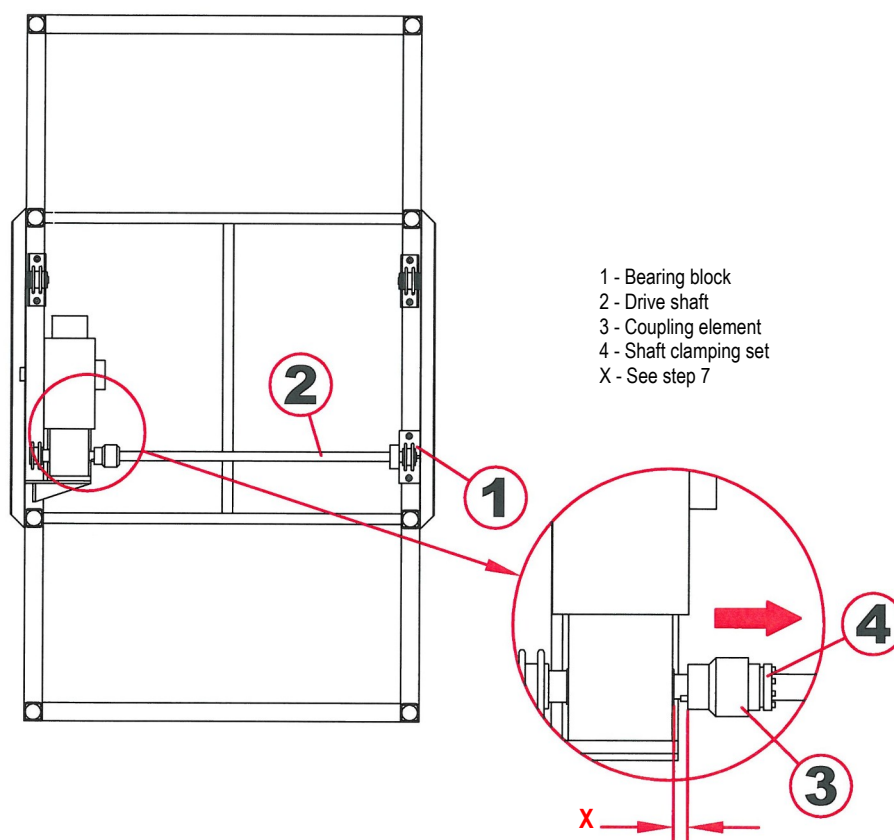


Fig. 3: Remove vertical shaft

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

5.3.3 Prepare the side parts for erection

Step	Task	Important note/illustration
	Erection of side parts To make identifying the four side parts easier, these are marked on the underside on the step side. Identification X.Y, where the first digit is the number of the respective side part (1 to 4) and the second digit is the respective rectangular tube on the side part (1 or 2). The illustration to the right shows the system of the side part identification.	
	Securing the cable If you use a cable to erect the side parts, follow the instructions for fastening, with one cable securing device on each side of the side parts. Cable securing devices are available from Hänel.	Note: You can install the hook bracket for the safety rope and the mounting bracket with feed line and mounted turnbuckle (see Chapter 5.3.7) before erecting the side parts. Note: For side parts with two or more pieces, connect the two parts using the flat joint and secure using the galvanised socket head cap screw DIN 912 / ISO 4762-M12x30 and washer DIN 125 / ISO 7089-12 (SP 3). In doing so, note that the running surfaces of the extractor rollers must be flush at the joints. For lift height: • If 8 m (314.96 in) < lift height < 15.9 m (625.98 in), the side parts come in two parts by default • If 15.9 m (625.98 in) < lift height < 20 m (787.40 in), the side parts come in three parts by default. The second and third side part differ in that the third side part has holes for anchoring the top frame (see Chapter 5.3.5). With special division: see order confirmation. For ≥ 4-piece side parts, the bottom side parts on rectangular tube _2 are marked as follows: • Bottom side part: 1 • First attachment piece: 2 • Second attachment piece: 3 • Etc.

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

Step	Task	Important note/illustration
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Note:

Before erecting the side parts, screw in the screws for the panels by a few turns. To make screwing them in easier, you can use a distance gauge.

- 1 Loop the cable [1] as shown around the side part at a height equal to $\frac{2}{3}$ the height of the side part and tighten the cable so that it cannot slide down.

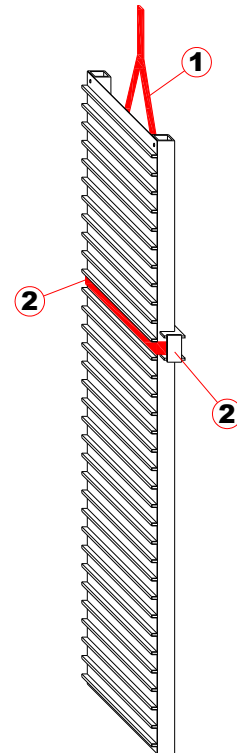


Fig. 5: Wrapping the cable around the side part

- 2 Attach the cable securing device [2]:
Slide the U-profiles on the backward-facing part of the side part into the steps above and below the cable [1] and onto the vertical rectangular tube (see Fig. 6 and Fig. 7).

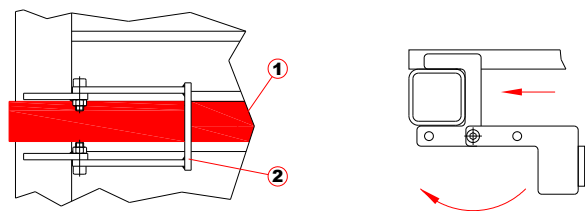


Fig. 6: Attaching the cable securing device

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

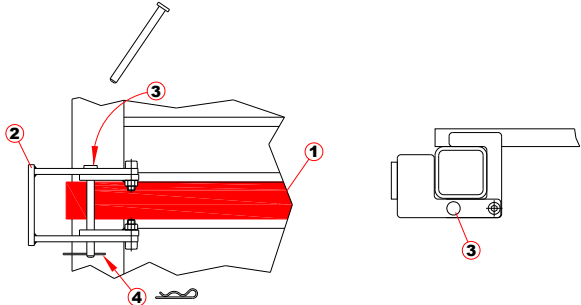
Step	Task	Important note/illustration
3	Securing the cable: Insert the bolt [3] as shown and secure it using the spring cotter [4]. Check that the two screws are tightened securely in the pivot point. If not, these are to be tightened.	

Fig. 7: Securing the cable



! DANGER

There is a substantial risk of injury, including fatal injury, from falling of the side parts. For this reason, you have to secure the side parts to prevent them from falling over when erecting them.

Examples for securing them are:

- Assistants that hold the side part securely - possible up to 4 m (157.48 in) side part height
- Securing it to a raised forklift fork,
- Securing it to a crane,
- Securing it to the building ceiling with a cable or chain block.

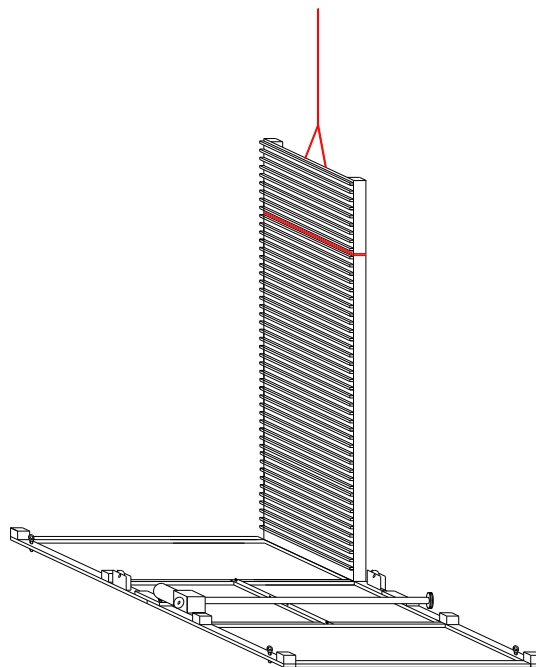


Fig. 8: Example: Securing the side parts with a cable

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

5.3.4 Erecting the side parts

Step	Task	Important note/illustration
		 Note Install the rear side parts first, starting with side part 4.
1	Erect the side part marked number 4 at the right rear, insert it into the plugs on the bottom frame and screw the rectangular tubes onto the plugs at the bottom using 2 socket head cap screws DIN 912 / ISO 4762 M12x30 galvanised (SP 3).	  DANGER Substantial risk of injury, including fatal injury, from overturning side parts and crushing hazard when inserting into the rectangular tubes! • Securing the side parts against overturning • Exercise increased caution when plugging in the side parts.
2	Install the side part marked number 3 on the frame at the left rear. Follow the same procedure as for side part 4.	 Note Before installing the first two rear panels or the bottom front panel, install each bottom cross bracket immediately after erecting opposite side parts for stabilisation.
3	Insert the first two standard rear panels. Note that the diagonal strut reinforcements of the individual rear panels run on alternating sides. Always install the bottom rear panel in right version (definition of "right version": When viewed from inside, the diagonal strut reinforcement runs from the lower left to the upper right). See here also Figure 9. If not already carried out before erection, screw 8 socket head cap screws DIN 912 / ISO 4762-M10x20 (SP 1) by a few turns on the lower rear side in the rectangular tubes 3.1 and 4.1 of the side parts 3 and 4 (see labelling and Fig. 4). Set the lowest standard rear panel on the side part, hook it into the screws and push it down all the way. Screw on the standard rear panel from the inside. Similarly, install the next standard rear panel above it. Then screw the panels on both sides with 2 (> 2460: 3) socket head cap screws DIN 912 / ISO 4762-M5x16 and nuts DIN 934 / ISO 4032-M5 (SP 1).	  DANGER Substantial risk of injury, including fatal injury, in the case of incorrect installation due to the safety of the lift no longer being guaranteed! Having the diagonal strut reinforcements run on alternating sides is absolutely required for structural strength. Screwing the rear panels together on both sides is required as well.
		 Note • With two-piece or multiple-piece side parts, insert all rear panels that can be installed after the erection of the lowest side parts. After the side part pair is inserted over them, screw them in and insert the remaining rear panels. With multiple-part side parts, install the next side part pair including rear panels over it. Then clamp a cover over the stepped joint from outside at every joint of the side parts. Hammer these into place using a dead blow hammer or a plastic pad with a large surface area. The tab folds back automatically. Screw the cover together with the flat joint screw (M12x30; see Chapter 5.3.3).

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

Step	Task	Important note/illustration
		Note (continued) Note: - For a one-sided cable duct at the height of the joint, the cover plate is screwed together with the other pipe of the side part - For a two-sided cable duct at the height of the joint, manually bend the tab 180° outwards and do not screw it on For two-piece or multiple-piece lift side parts and multiple immediately adjacent lifts: at the front and rear of the lift, screw one additional connecting brace to each flat joint using the flat joint screws. Also observe Section 5.3.8, 5.3.11 and 5.3.27 for more information. Note: Special versions if the installation spaces are too tight: see order confirmation The rear panels can have cover strips, in a design identical to the front panels. They are installed from the outside, as described for the front panels and cover strips.
4	Install side parts 1 and 2 on the front of the bottom frame in the same way as for side parts 3 and 4 (see Fig. 9).	
5	Inserting the bottom front panel: If not already carried out prior to erecting the parts: Screw 4 socket head cap screws DIN 912 / ISO 4762 M10x20 x (see SP 3) into side parts 1 and 2 and hook the front panel into the screws. Then push the front panel all the way down and tighten the screws. Lean-Lift type 1000 or for an access point level 890 mm [35.04 in]: Screw the front panel to side parts 1 and 2 with 8 socket head cap screws DIN 912 / ISO 4762-M10x20 (SP 3). It is not possible to hook in the front panel.	 Note With two-piece or multiple-piece side parts, insert all front panels above the sliding door panel that can be installed after the erection of the lowest side part. After the side part pair is inserted over it, screw it in and insert the remaining front panels. With multiple-part side parts, install the next side part pair including front panels over it. When inserting the front panels, observe Chapter 5.3.11. Then clamp a cover over the stepped joint from outside at every joint of the side parts. Hammer these into place using a dead blow hammer or a plastic pad with a large surface area. The tab folds back automatically. Screw the cover together with the flat joint screw (M12x30; see Chapter 5.3.3). Note: - For a one-sided cable duct at the height of the joint, the cover plate is screwed together with the other pipe of the side part

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

Step	Task	Important note/illustration
		Note (continued) - For a two-sided cable duct at the height of the joint, manually bend the tab 180° outwards and do not screw it on • For two-piece or multiple-piece lift side parts and multiple immediately adjacent lifts: at the front and rear of the lift, screw one additional connecting brace to each flat joint using the flat joint screws. Also observe Section 5.3.8, 5.3.11 and 5.3.27 for more information.

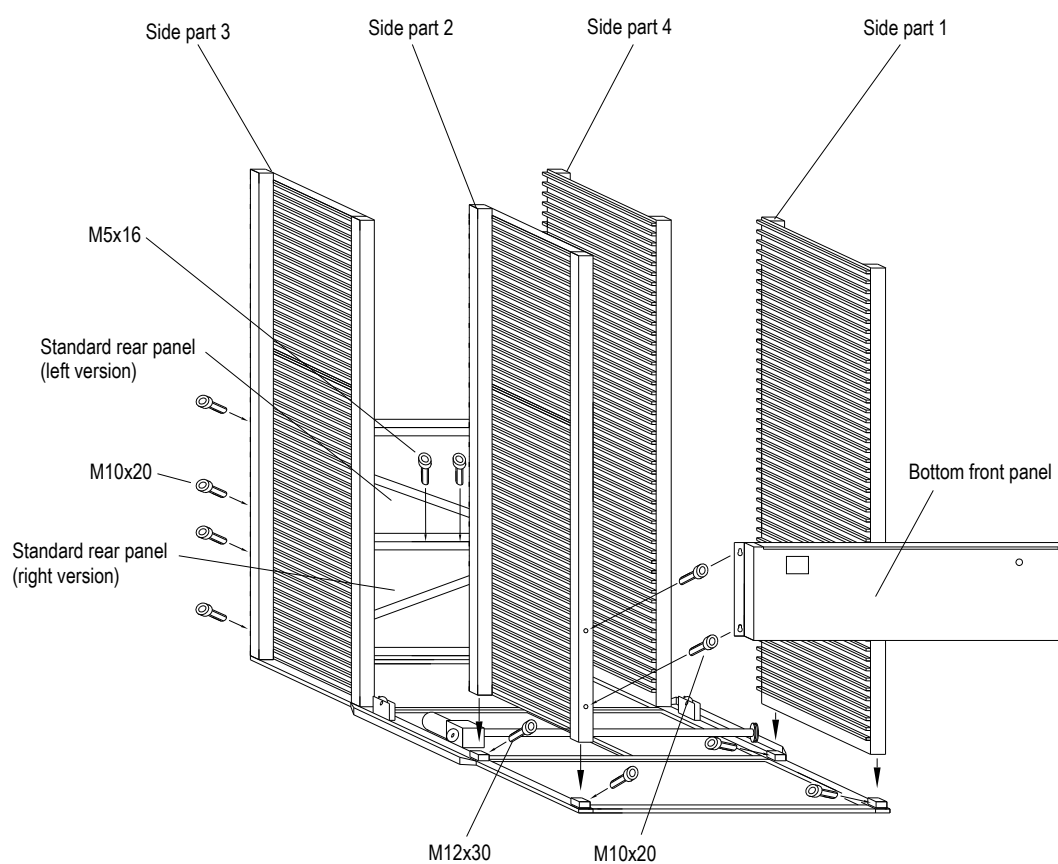


Fig. 9: Erecting the side parts

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

5.3.5 Installing the top frame

Step	Task	Important note/illustration
	In order to drive in the lift with the raised working platform, you have to uninstall the bottom front panel and then reinstall it right away after.	 ! DANGER There is a substantial risk of injury, including fatal injury, from falling of the side parts. Securing the side parts against overturning Note: For lift depths 635 and 825, the top frame is supplied in 5 pieces; for lift depths 1047 and 1270, the top frame is delivered in 6 pieces. For older versions, the headpieces can be one-piece or two-piece. They are installed in the same logical manner as described below.
1	Plug the side sections into the rectangular tubes of the side parts as shown in Fig. 10.	 ! DANGER There is a substantial risk of injury, including fatal injury, from falling of the frame. During transport, the top frame has to be secured against falling (e.g. with a safety catch or safety rope between the chain wheels).
2	Screw the rectangular tubes to the plugs using the socket head cap screws DIN 912 / ISO 4762 - M12x30 galvanised (SP 3).	SAFETY INSTRUCTIONS  Wear safety gear! The safety equipment must be worn for all transport and installation work!

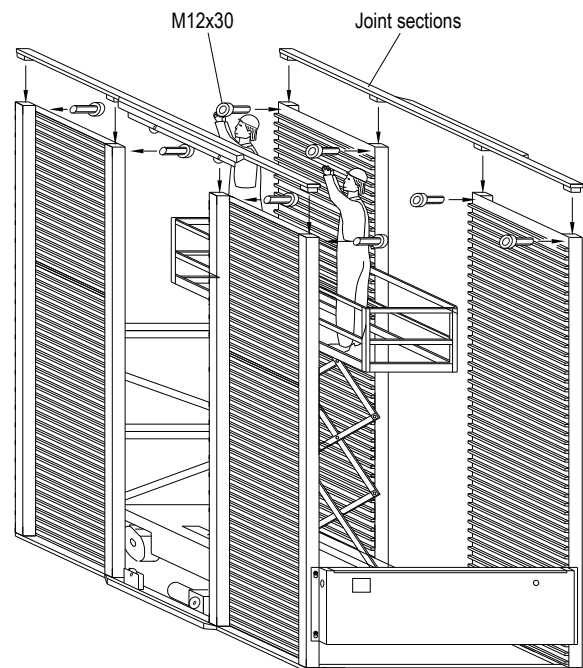


Fig. 10: Installing the top frame: joint sections

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

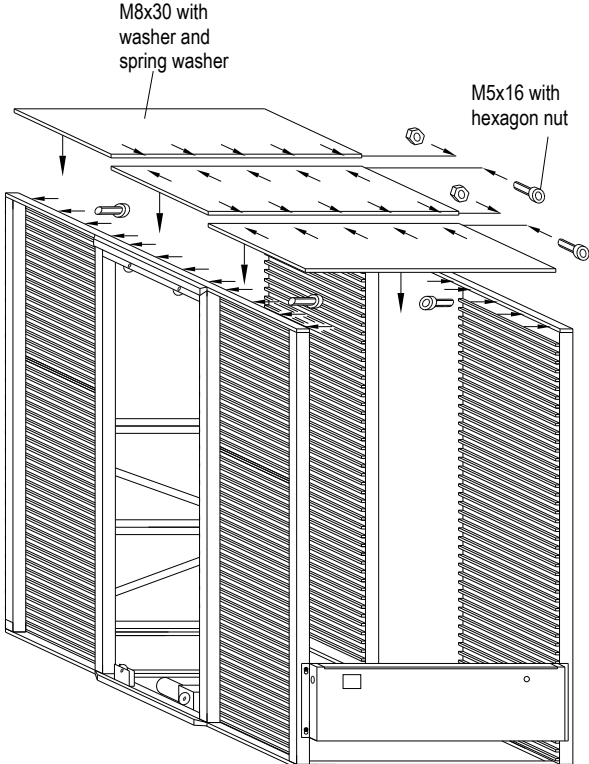
Step	Task	Important note/illustration
3	Insert the three or four headpiece panels of the top frame and screw them in using cylinder screws DIN 912 / ISO 4762-M8x30, washers DIN 125 / ISO 7089-8 and spring washers DIN 127 -A8 (SP 6) with the side sections. Then also screw the headpiece panels to each other using cylinder screw DIN 912 / ISO 4762-M5x16 and hex nuts DIN 934 / ISO 4032-M5 (SP 6).	 M8x30 with washer and spring washer M5x16 with hexagon nut

Fig. 11: Example: Installing the 5-piece upper top frame

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

5.3.6 Installing the vertical chains and vertical drive (for type depths 1047 and 1270)

Step	Task	Important note/illustration
1	Fit all four vertical chains to the chain wheels of the upper bearing shells.	 Note - The spring of the chain joint has to face towards the outside of the lift (also refer to the Installation Instructions for "Chain joint installation" 99900004 for more information). - The chains are marked at one end, e.g. with a silver dot. During installation of the vertical chains, make sure later that this mark is on the same side of the extractor (top or bottom) for all four chains!
2	Secure the chains against slipping through.	Note: After fitting the chains, connect the chain ends using a cable or cable tie.
3	For type depths 1047 and 1270, install the vertical drive on the bottom frame. Use the screws provided with the bottom frame.	 Note The terminal box of the vertical drive faces the centre of the lift.

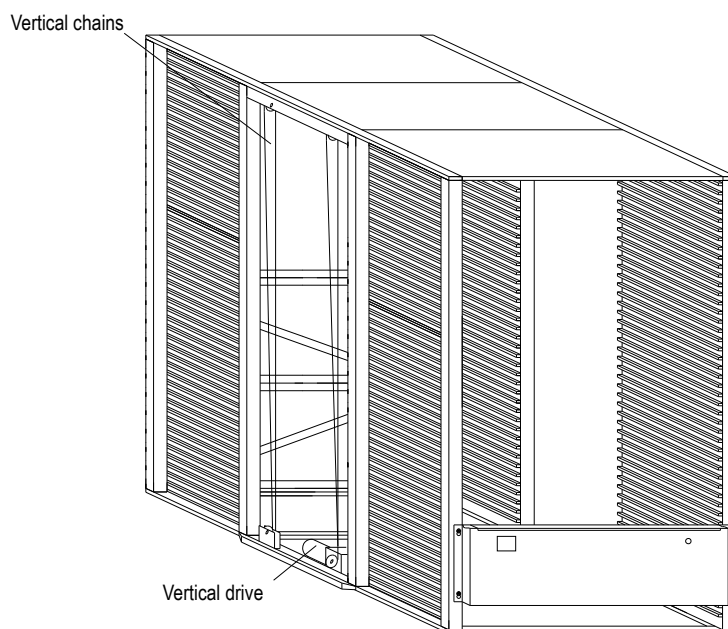


Fig. 12: Installing the vertical chains

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

5.3.7 Installing the vertical feed line to draw in a safety rope (for lift height > 4 m (157.48 in))

Step	Task	Important note/illustration
1	With the raised working platform, approach the lift on the service door side.	 Note - The installation of the vertical feed line for the safety rope makes it possible to draw in a safety rope. - The safety rope provides fall protection for the service technician.
2	Screw the hook bracket (see small parts box KK) for the safety rope at the top onto the rectangular tube (1.2 and 2.2). In addition, use two socket head cap screws DIN 912 / ISO 4762-M12x100-12.9 and hex nuts DIN 982 / ISO 7040-M12. For more information, refer to the top enlarged section in Fig. 13.	 Note - If the front panels are the rear-panel version (can be installed from the inside) and the rear panels are the front-panel version (can be installed from the outside), the hook bracket has to be fastened to rectangular tube 3.2 and/or 4.2. - For a multi-unit network, the hook bracket must always be installed facing the service door. - Check that the knurled nut for the carabiner is tightened securely.
3	Install the mounting bracket, with the feed line and mounted turnbuckle (see small parts box KK), below the bottom side hook on the rectangular tube on which the hook bracket for the safety rope is located. Also use two socket head cap screws DIN 912 / ISO 4762-M8x16 (SP 3).	 Note - After opening the service door, the sign on the mounting bracket must be visible. - The text on the sign must be legible and must not be upside-down; unscrew the fastening screws and turn the sign if necessary.

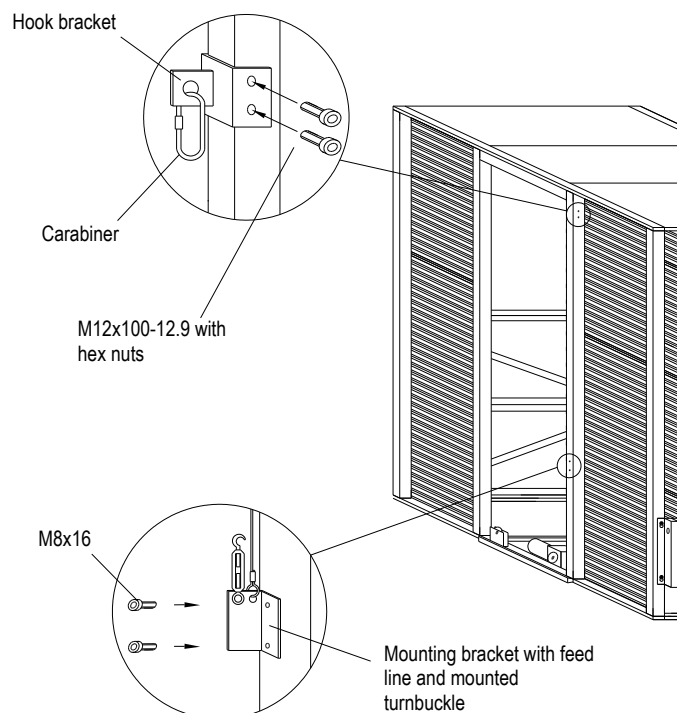


Fig. 13: Install hook bracket for the safety rope and mounting bracket with feed line and mounted turnbuckle

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

Step	Task	Important note/illustration
4	Pull the feed line on the mounting bracket with turnbuckle upwards with the carabiner and then down again. Hook the free end of the feed line into the hook of the turnbuckle and tighten the cable until finger-tight (see Fig. 14).	 ! DANGER There is a substantial risk of injury, including fatal injury, if the feed line is not installed correctly! The feed line must be routed inside of the side brackets. Substantial damage to the extractor if feed line is not taut. It is absolutely necessary for the feed line to be taut to prevent it from colliding with the extractor.

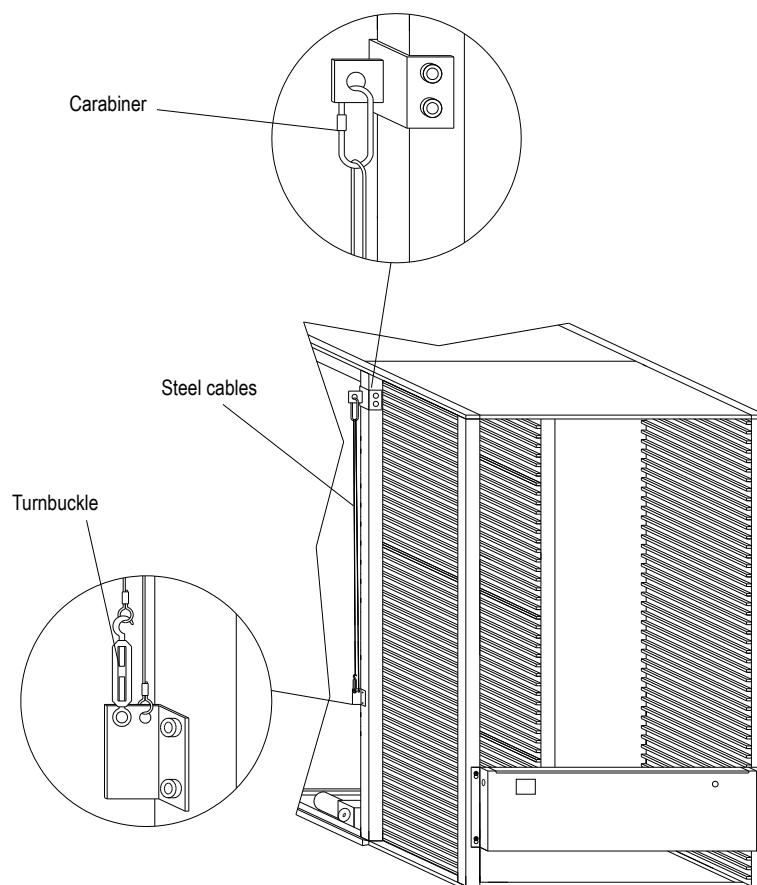


Fig. 14: Drawing in the feed line

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

5.3.8 Installing the remaining rear panels and slotted mounting brackets for positioning sensors

Step	Task	Important note/illustration
	If two or more lifts are immediately adjacent, additional panelling covers each joint at the front or rear (see Chapter 5.3.27). In order to drive in the lift with the raised working platform, you have to uninstall the bottom front panel and then reinstall it right away after.	Note For two-piece or multiple-piece side parts of the lift and multiple immediately adjacent lifts: Before installing the rear panels and the panelling of the joint above the flat joint, first install all other lifts so that the connecting brace between each pair of lifts can still be screwed on, also see Section 5.3.4 for more information. Note: For immediately adjacent lifts, the front and rear panelling sections must be installed along with the panels (as they are positioned between the rectangular tubes and panels); for more information, refer to Section 5.3.27.
1	According to Section 5.3.4, "Inserting the rear panels": If not already carried out before erection, screw the remaining socket head cap screws DIN 912 / ISO 4762-M10x20 (SP1) by a few turns into the rear side of rectangular tubes 3.1 and 4.1 of side parts 3 and 4. Install the rest of the standard rear panels and the rear extension panel at the top as shown. Then screw the panels on both sides with 2 (> 2460: 3) socket head cap screws DIN 912 / ISO 4762-M5x16 and nuts DIN 934 / ISO 4032-M5 (SP 1).	 DANGER Substantial risk of injury, including fatal injury, in the case of incorrect installation due to the safety of the lift no longer being guaranteed! Having the diagonal strut reinforcements run on alternating sides is absolutely required for structural strength. Screwing the rear panels together on both sides is required as well. Note: - Special versions if the installation spaces are too tight: see order confirmation The rear panels can have cover strips, in a design identical to the front panels. They are installed from the outside, as described for the front panels and cover strips. - For lift widths 2860 to 3260, depending on lift height, 2 extension panels can also be present.

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

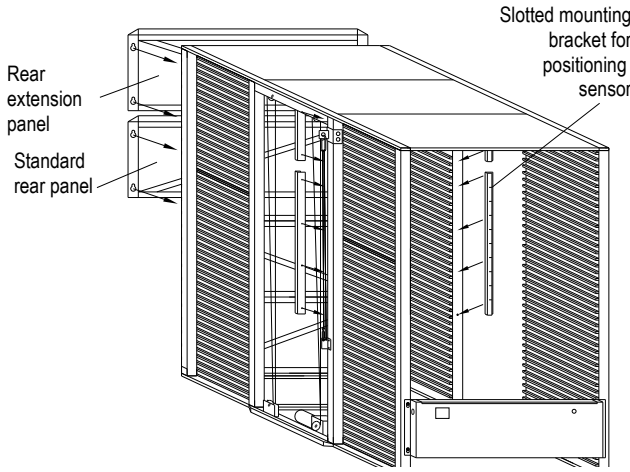
Step	Task	Important note/illustration
2	Preparation: since the lowest slotted mounting bracket for positioning sensors is not yet installed at this point due to the installation of the extractor, you have to start by installing the second mounting bracket from the bottom (see Fig. 15). Determine the correct height of the second mounting bracket by marking the position of the lowest one. Mount the slotted mounting brackets for the positioning sensors on the rectangular tubes 2.2 and 4.2 to the pilot-drilled countersunk holes using countersunk screws DIN 7500-1 ME-M M5x16 (SP 1).	

Fig. 15: Installing the rear panels/slotted mounting brackets for positioning sensors



Note

- There may be no offset at the joints of the slotted mounting brackets for positioning sensors.
- The slotted mounting brackets may not have any bent ridges or any dirt in the cut-outs.
- All fastening screws must be securely tightened.

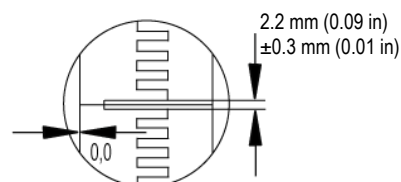


Fig. 16: Max. tolerances of the joints

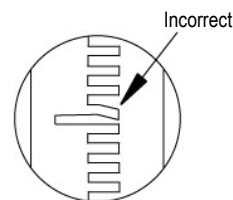


Fig. 17: Checking the brackets

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

5.3.9 Installing the cross bracket and side brackets

Step	Task	Important note/illustration
1	Upper and lower cross brackets: Screw the cross brackets to the rectangular tubes between the rectangular tube 3.2 and 4.2 and between the rectangular tubes 1.2 and 2.2 with socket head cap screw DIN 912 / ISO 4762-M12x50 and washers DIN 125 / ISO 7089-12 (SP 1).	 ! DANGER Substantial risk of injury, including fatal injury, in the case of incorrect installation due to the safety of the lift no longer being guaranteed!
2	Centre cross bracket: Insert the stiffening plates into the carrier behind the cross brackets. Fasten the centre cross bracket as described under Step 1. Screw the stiffening plate to the cross brackets using socket head cap screws DIN 912 / ISO 4762-M8x16 and washers DIN 125 / ISO 7089-8 (SP 1).	 Note - Depending on the height and maximum permitted load of the lift, cross brackets must be installed on the side parts for structural strength. The maximum permitted load is specified on the type plate on the bottom front panel. - The installation position of the cross bracket is determined by the recessed step carrier. - The number and distribution of the cross brackets is to be taken from the table below.

		Total load of the lift in tonnes			
		20 t (44100 lbs)	30 t (66150 lbs)	40 t (88200 lbs)	60 t (132300 lbs) *
Lift height	≤ 3500 mm (137.80 in)	4 (2xT / 2xB)	4 (2xT / 2xB)	4 (2xT / 2xB)	6 (2xT / 2xC / 2xB)
	> 3500 mm (137.80 in) ≤ 6000 mm (236.22 in)	4 (2xT / 2xB)	4 (2xT / 2xB)	6 (2xT / 2xC / 2xB)	6 (2xT / 2xC / 2xB)
	> 6000 mm (236.22 in) ≤ 6500 mm (255.91 in)	4 (2xT / 2xB)	6 (2xT / 2xC / 2xB)	6 (2xT / 2xC / 2xB)	8 (2xT / 4xC / 2xB)
	> 6500 mm (255.91 in) ≤ 9500 mm (374.02 in)	6 (2xT / 2xC / 2xB)	6 (2xT / 2xC / 2xB)	6 (2xT / 2xC / 2xB)	8 (2xT / 4xC / 2xB)
	> 9500 mm (374.02 in) ≤ 10000 mm (393.70 in)	6 (2xT / 2xC / 2xB)	6 (2xT / 2xC / 2xB)	8 (2xT / 4xC / 2xB)	8 (2xT / 4xC / 2xB)
	> 10000 mm (393.70 in) ≤ 12000 mm (472.44 in)	6 (2xT / 2xC / 2xB)	6 (2xT / 2xC / 2xB)	8 (2xT / 4xC / 2xB)	10 (2xT / 6xC / 2xB)
	> 12000 mm (472.44 in) ≤ 12500 mm (492.13 in)	6 (2xT / 2xC / 2xB)	8 (2xT / 4xC / 2xB)	8 (2xT / 4xC / 2xB)	10 (2xT / 6xC / 2xB)
	> 12500 mm (492.13 in) ≤ 15000 mm (590.55 in)	8 (2xT / 4xC / 2xB)	8 (2xT / 4xC / 2xB)	8 (2xT / 4xC / 2xB)	10 (2xT / 6xC / 2xB)
	> 15000 mm (590.55 in) ≤ 20000 mm (787.40 in)	Not possible	Not possible	12 (2xT / 8xC / 2xB)	12 (2xT / 8xC / 2xB)

	Abbreviation			
	O	U	M	*
Explanation of terms	Cross brackets at top of lift	Cross brackets at bottom of lift	Cross bracket in centre of lift	Plus 1 cross bracket above each access point

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

Step	Task	Important note/illustration
		Note - With prepared lift stacking or unstacking, the position of the module cross bracket is to be taken from the sign "Blocked carriers" in the electrical drawer. - With special access opening ≥ 1180 mm (46.46 in), an additional cross bracket is required above each access point for structural strength. The installation position is determined by the recessed steps. If a 'cross bracket on the shaft side with stiffening plate' and an 'additional cross bracket' (on the wall side for 60 metric tonnes (66.14 US tons) or for a special access opening ≥ 1180 mm (46.46 in)) coincide, then a shorter stiffening plate is used. The stiffening plate is screwed onto the cross bracket on the shaft side.
3	Attach the left and right side brackets to rectangular tubes 3.2 and 2.2 and 4.2 and 1.2 using socket head cap screws DIN 912 / ISO 4762-M8x16 (SP 1).	Note If the side panelling can be reached, for example, via a pedestal or a storey, it may be necessary to install additional side brackets as a railing for fall protection equipment (see order confirmation). ⚠ DANGER There is a substantial risk of injury, including fatal injury, if the feed line is not installed correctly! The side brackets must be installed such that the feed line runs inside them (see Chapter 5.3.7). Note: For lift version with 2 ribbon cables, also screw on the side bracket for fastening the ribbon cable at half the lift height. The Installation Instructions for "Cable Carrier for Unit Height > 8.5 m (334.65")" (LL-SCHLE) are to be observed regarding the hanging side of the ribbon cables.

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

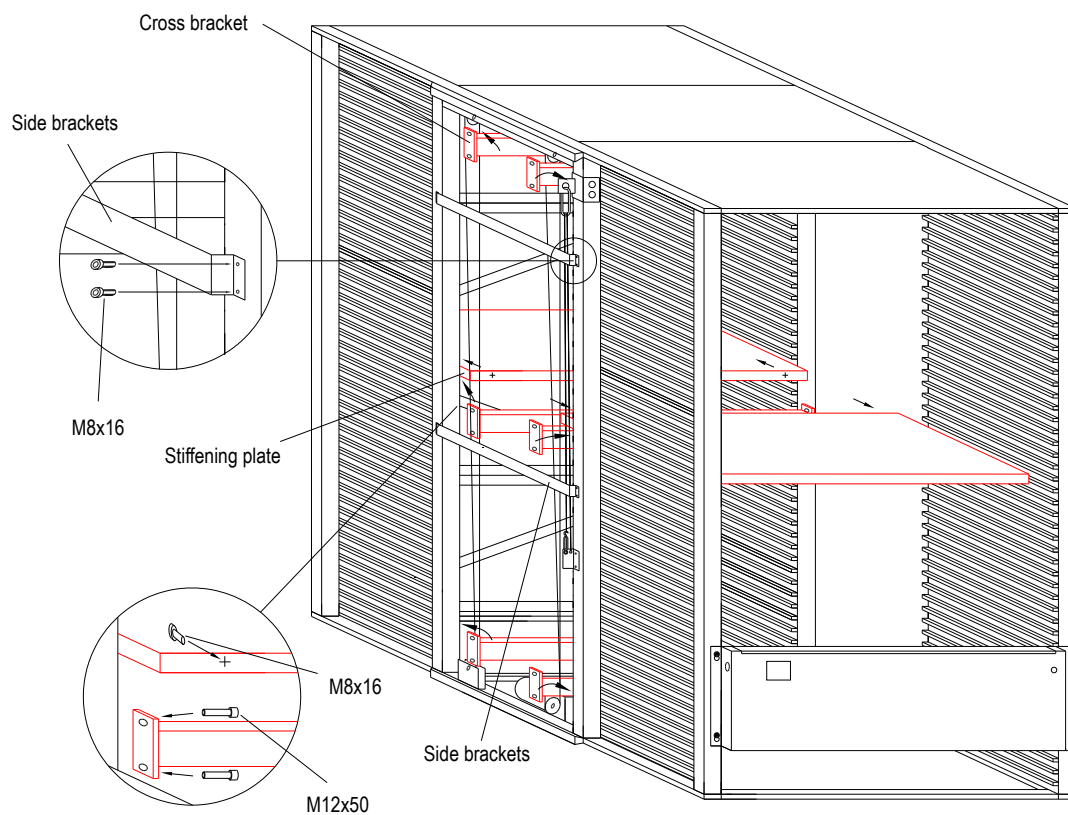


Fig. 18: Installing the cross bracket and side brackets

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

5.3.10 Install the bottom access point and the sliding doors

Step	Task	Important note/illustration
	If two or more lifts are directly adjacent, additional panelling covers each joint at the front or rear.	Note: For immediately adjacent lifts, the front and rear panelling sections must be installed along with the panels (as they are positioned between the rectangular tubes and panels); for more information, refer to Section 5.3.27.
1	Install the base terminal strip below the bottom front panel using socket head cap screws DIN 912 / ISO 4762-M6x12, galvanised (SP 2). Anchor the base panelling to the base terminal strip with 4 pan head tapping screws DIN 7981 / ISO 7049-St4.8x13-F (SP 2); also follow the adjacent note.	 Note - The top and bottom edges of the base panelling must point towards the inside of the lift, and the cut-out for interfaces must be on the right side. Also follow the Installation Instructions for "Interfaces for Data Transfer" (PERIPMP12_). - For lifts with special access point level, special access opening or multiple access points, the arrangement of the access point components (sliding door panel, sliding door guide, bottom front panel below the access point, and sliding door) at every access point is identical to the standard access point.
2	Screw the left sliding door guide above the bottom front panel with the 3 lower mounting holes using 'button head screw' ISO 7380-M6x16 - galvanised (SP 2). Together with the sliding door guide, you also have to install the mountings of the safety light curtain (see here also Installation Instructions "Safety Light Curtain Werac Directly in Front of the Access Point" (LICHTSCB-WERAC)).	
3	Insert the sliding door into the left sliding door guide and set it down on the lower front panel.	Note: - Step does not apply for lift version without sliding door. The installation instructions "Access Point without Sliding Door" (ADDCASE) must be followed. - For special access opening 1480 mm [58.27 in], the sliding door has a two-piece design. Before inserting the sliding door, screw the two parts (short part at the top) using socket head cap screws DIN 912 / ISO 4762-M4x12 and washers DIN 125 / ISO 7089-4 to the slotted holes and hex nuts DIN 934 / ISO 4032-M4.
4	Insert the right sliding door guide into the sliding door and screw it onto the 3 lower mounting holes with 'button head screws' ISO 7380-M6x16 - galvanised (SP 2).	
5	If it was not yet installed at the factory: Screw the pulley for the sliding door onto the left and right of the sliding door panel using galvanised flat-head screws DIN 7985 / ISO 7045-M5x10 and galvanised prevailing torque type hexagon nuts DIN 985 / ISO 10511-M5 (see Fig. 19, Detail A).	

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

Step	Task	Important note/illustration
6	Securely screw the sliding door panel to the rectangular tubes along with the sliding door guide using 'button head screw' ISO 7380-M6x16 - galvanised (SP 2).	Note: - With the exception of the electrically operated sliding door and the sliding door in case of fire, 2 magnets are factory-installed at the sliding door panel and their two counterparts are installed at the sliding door for lift widths of ≥ 2860 so that the sliding door reliably stays open. Check that the magnets and counterparts are flush and adjust them if necessary by relocating the magnet in the available hole pattern. - If, due to excessively low lift height, the use of a sliding door is not possible, the installation of the sliding door and sliding door panels is omitted. Instead, above the access point, a special front panel with lighting panel is installed. - If, due to low lift height, the use of a front panel above the sliding door panel is not possible, this part is omitted. Instead, a special front panel mounted on the sliding door panel is then installed above the sliding door panel. If the sliding door panel has not yet been pre-assembled at the factory, then before installing it, screw it together with the special front panel using 2 (> 2460: 3) socket head cap screws DIN 912 / ISO 4762-M5x16 and hex nuts DIN 934 / ISO 4032-M5 (SP 1).

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

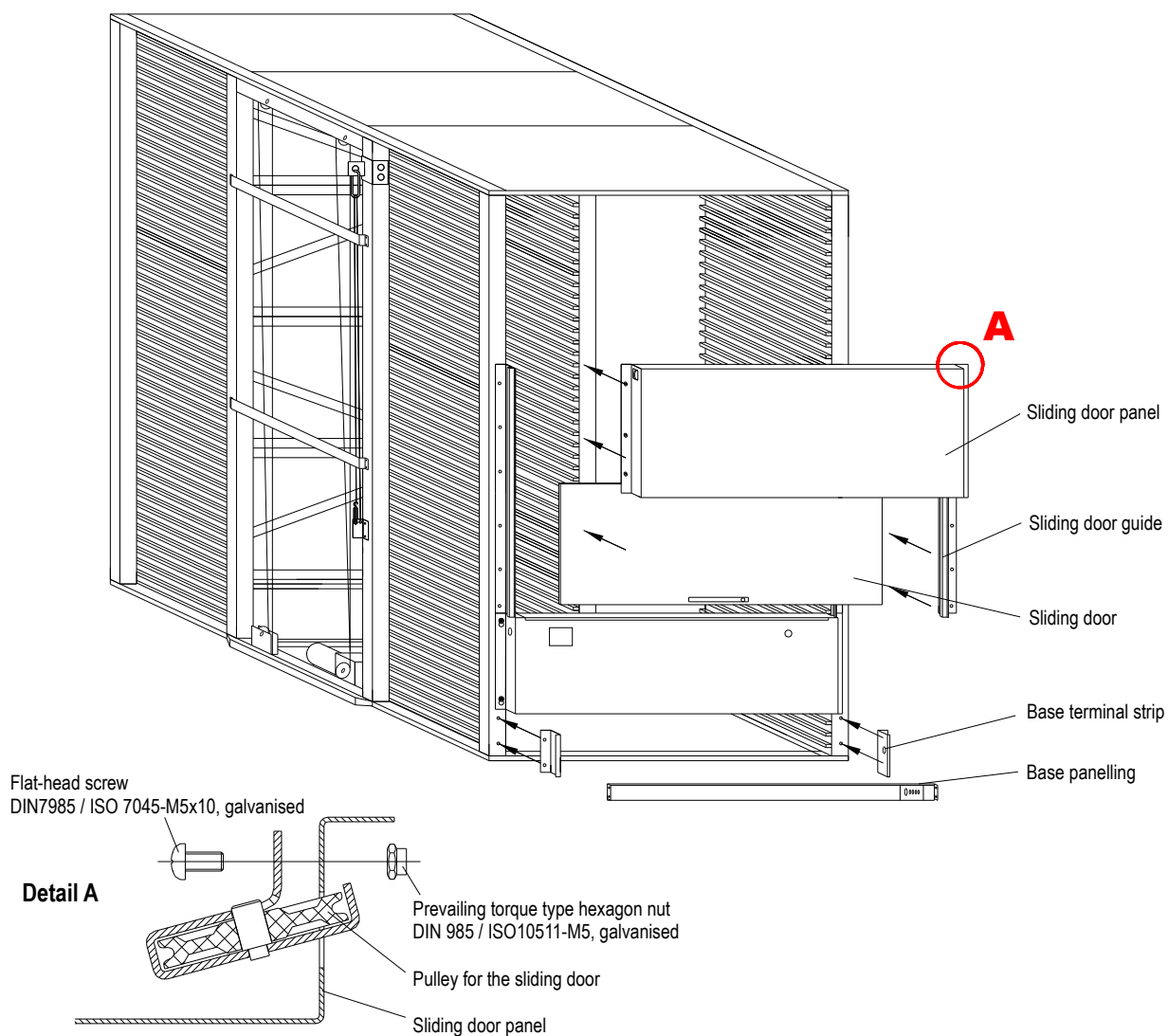


Fig. 19: Installing the sliding door and sliding door panel

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

5.3.11 Installing the sliding door cables, top front panels and container limit stop

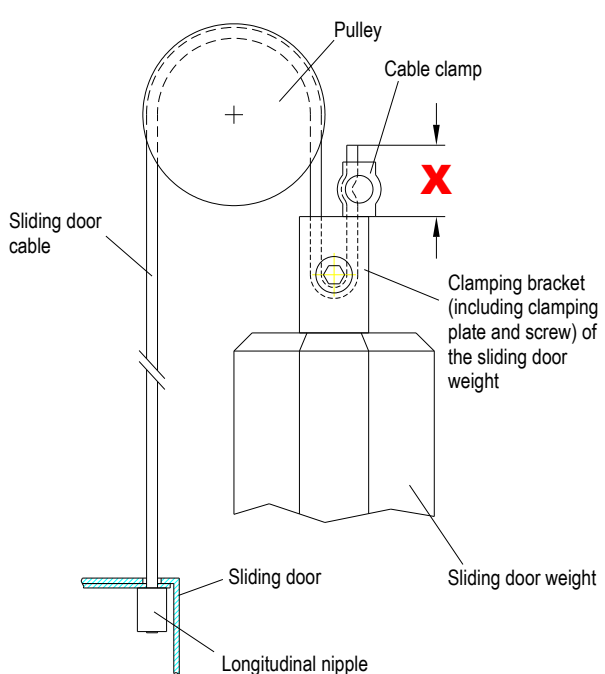
Step	Task	Important note/illustration
	If two or more lifts are immediately adjacent, additional panelling covers each joint at the front or rear (see Chapter 5.3.27).	Note For two-piece or multiple-piece side parts of the lift and multiple immediately adjacent lifts: Before installing the front panels, rear panels and the panelling of the joint above the flat joint, first install all other lifts so that the connecting brace between each pair of lifts can be screwed on later. In addition, note Section 5.3.4.
1	The two sliding door cables (see small parts box KK) are routed through the drill holes on the top side of the all the way to the longitudinal nipples. Then, guide the cable ends to the outside through the left and right pulleys in the sliding door panel.	Note: For special access opening 1480 mm [58.27 in], the two sliding door cables are first routed through the drill holes on the top side of the bottom section of the sliding door and afterwards through the drilled holes on the top of the sliding door.
2	The sliding door weights (see small parts box KK) are fastened by adjusting the remaining cable length to the sliding door weight (see Fig. 20). - Install cable clamp (see small parts box KK) at a distance of $X = 25 \text{ mm (0.98 in)}$ or $X = 40 \text{ mm (1.57 in)}$, for electr. sliding door, from the cable end (see Fig. 20) and tighten the hex nut. - Wrap the cable around the screw in the clamping bracket of the sliding door weight (see Fig. 20) and gently tighten the clamping plate. - Hold the sliding door cable in place and pull on the sliding door weight until the cable clamp is touching the clamping bracket of the sliding door weight (see Fig. 20). - Securely tighten the clamping plate using the screw.	Note - Wrap each sliding door cable directly around the screw at the clamping bracket of the respective sliding door weight. - If the sliding door is open, the sliding door weight must not touch any cables. - If the sliding door is closed, the sliding door weight must not be pulled out of the guide plate. 

Fig. 20: Cable guide

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

Step	Task	Important note/illustration
3	Insert front panels (see Fig. 21). Ensure that the diagonal strut reinforcements of the individual front panels run on alternating sides. Always install the bottom front panel in right version (definition of "right version": When viewed from inside, the diagonal strut reinforcement runs from the lower left to the upper right). If you have not done so already before erecting the parts, screw the socket head cap screws DIN 912 / ISO 4762-M10x20 (SP 1) a few revolutions at the front into the rectangular tubes of the side parts. Apply the standard front panels and the front extension panel on the side part, attach the screws and press down completely. Screw on the front panel from outside. Similarly, install the next front panel above it. Then screw in the panels on both sides and fasten 2 (> 2460: 3) socket head cap screws DIN 912 / ISO 4762-M5x16 and hex nuts DIN 934 / ISO 4032-M5 (SP 1) to the sliding door panel.	  Substantial risk of injury, including fatal injury, in the case of incorrect installation due to the safety of the lift no longer being guaranteed! - Having the diagonal strut reinforcements of the front panels run on alternating sides is absolutely required for structural strength. - Also ensure that the front panels are screwed to each other. Note: - Special versions if the installation spaces are too tight: see order confirmation The rear panels can have cover strips, in a design identical to the front panels. They are installed from the outside, as described for the front panels and cover strips. The front panels can have a design identical to rear panels. They are installed from the inside, as described for the rear panels. If, due to low lift height, the use of a front panel above the sliding door panel is not possible, this part is omitted. Instead, a special front panel is then installed on the sliding door panel above the sliding door panel (see also Chapter 5.3.10). - For immediately adjacent lifts, the front and rear panelling sections must be installed along with the panels (as they are positioned between the rectangular tubes and panels); for more information, refer to Section 5.3.27. Note: For: -Lift type > 2460, -Pallet container or -Lift type 2460 - ____/ 1000 an additional second limit stop must be installed on the other side.
4	Install the limit stop of the container at the front left, above the container ejector slot on the front rectangular tube of the side part. Use two thread forming screws DIN 7500-1 EE-M5x16 with spring washers DIN 127-A5 (see small parts box KK).	

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

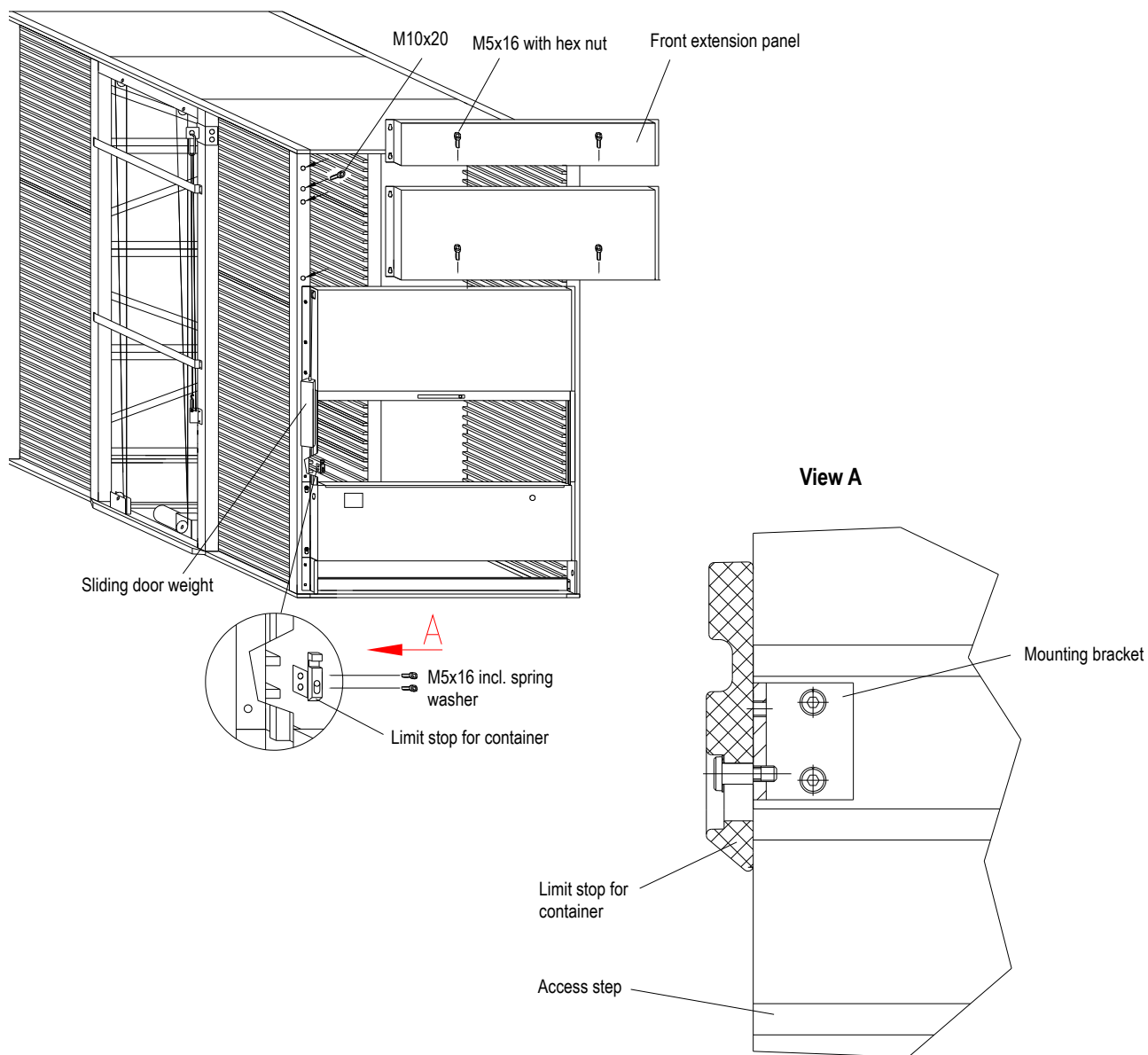


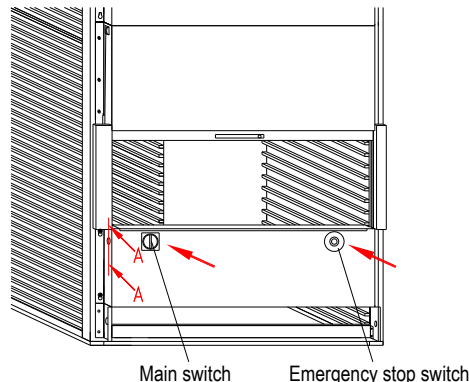
Fig. 21: Installing the sliding door cables, top front panels and container limit stop

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

5.3.12 Installing the main switch and emergency stop switch and routing the cables

Step	Task	Important note/illustration
1	Install the main switch [Q2] according to the Installation Instructions for "Siemens Main Switch in Bottom Front Panel" LL-MSW and the emergency stop switch [S4] in the bottom front panel.	Note: - When there are multiple access points, only one main switch is installed on the first access point (on the bottom front panel). - For lifts in multi-unit networks, the cable routing is illustrated in special cable routing diagrams. - The V2A cover must be clamped onto the top of the bottom front panel below each access point. - For lifts with transporters, the centring mandrel is to be attached at the same time (see Chapter 5.3.26-C4).
2	Route the cables behind the bottom front panel below each access point, then guide it sideways out the left or right cable bushing and downwards to the base terminal strips. There, guide it to the inside of the lift through the side cable bushings.	 Main switch Emergency stop switch
3	Attach the protective earth cable with brass Philips head screw DIN 84 / ISO 1207-M4x12, 4-mm galvanised contact washers and brass nut DIN 934 / ISO 4032-M4 (SP 5) (see Fig. 23).	Fig. 22: Installing the main switch and emergency stop switch  ⚠ DANGER Risk of fatal injury from electric current! Paint/coating residue or missing contact washers can impair the function of the earth wire or even defeat it completely. - Check whether there is paint/coating residue that has to be removed! - Make sure to install the contact washers in the correct direction.

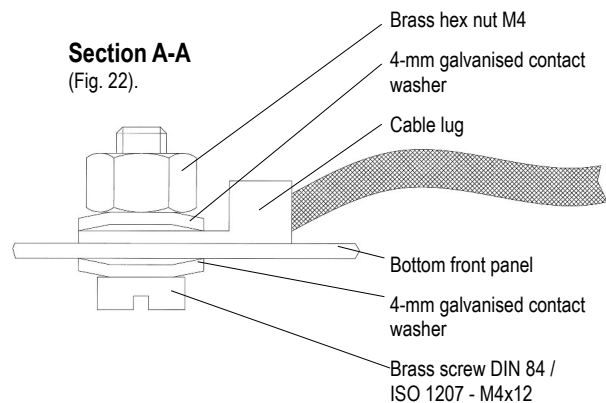


Fig. 23: Earth wire connection bottom front panel

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

5.3.13 Install safety light curtain and height detection light barriers

Step	Task	Important note/illustration
1	Install the safety light curtain according to the Installation Instructions for "WERAC Safety Light Curtain Directly in Front of the Access Point" (LICHTSCB-WERAC).	Note: - Lifts from production week 21/2008 or later are equipped with a safety light curtain in front of the access point as a personal safety device. - Lifts up to production week 20/2008 are equipped with safety light barriers in front of the access point as personal safety devices. Installation of the safety light barriers is to be taken from the Installation Instructions "Safety Light Barriers Lean-Lift" (LICHTSC5).
2	Fasten the rear right receiver array on rectangular tube 1.2 (up to production week 42/2006: on the side panel) and the rear left transmitter array to rectangular tube 2.2 (up to production week 42/2006: on the side panel) with socket head cap screws DIN 912 / ISO 4762-M8x16 (up to production week 42/2006: with countersunk screws DIN 965 / ISO 7046-M4x8) (SP 2) to the available drill holes.	Note: - Also follow the Installation Instructions "HEIGHT". - When installing the height detection light barriers, ensure that the transmitter and receiver array are not scratched.

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

5.3.14 Installing the access point panelling

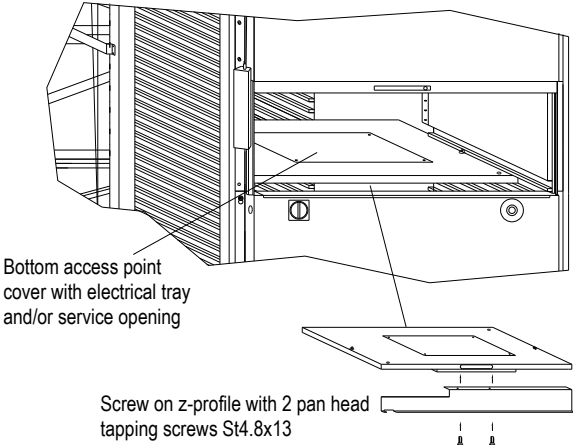
Step	Task	Important note/illustration
		Note: A) Electrical tray The cover of the bottom access point is equipped with an electrical tray in the following circumstances: • For lift with multiple access points (beginning at the second access point) • for special access point levels > 1500 mm (59.06 in) if the electrical drawer remains at the standard height, • for access point with high-speed door, • for lift type 840-635, • For electrical drawer at the rear side of the lift The switchboard of the electrical tray is fastened to the available threaded bolts of the lower access point cover with washers DIN 125 / ISO 7089-4 and prevailing torque type hexagon nuts ISO 10511-M4 (SP 5). The cable routing diagrams CABLELL_ are to be followed. B) Service opening The cover of the bottom access point is equipped with a service opening in the following circumstances: • For access point with weighing device The cable routing diagrams CABLELL_ are to be followed. 

Fig. 24: Access point with electrical tray and/or service opening

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

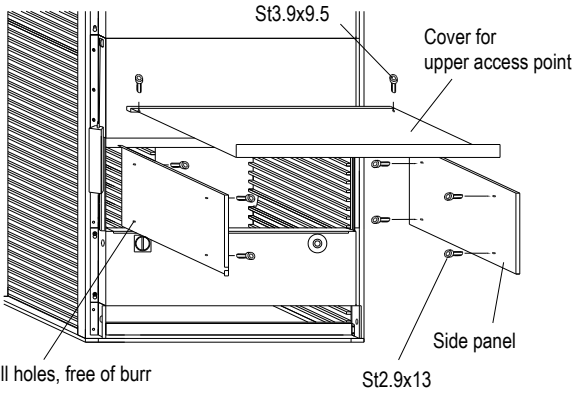
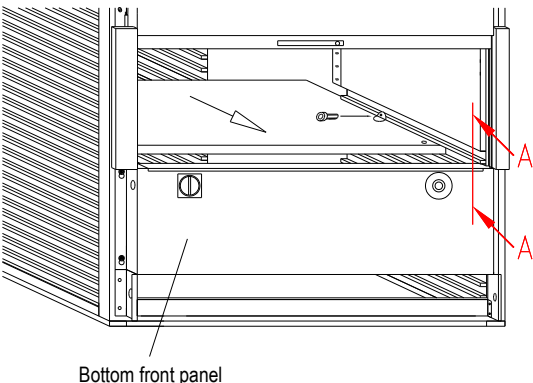
Step	Task	Important note/illustration
1	Insert the top access point cover into the top carrier from the outside (standard height 1713.5 mm / 67.46 in). Attach the left side panel to the step above the access point level and screw it down using 4 countersunk sheet-metal screws DIN 7982 / ISO 7050-St2.9x13 (SP 2). In the same way, install the right side panel to the step on the right. Screw the top access point cover to the side panels using pan head tapping screws DIN 7981 / ISO 7049-St3.9x9.5 (SP 2).	 Fig. 25: Installing the top access point cover and the side panels
2	Screw the lower z-profile on the lower access point cover with pan head tapping screws DIN 7981 / ISO 7049-St4.8x13-F (SP 5)(see Fig. 24).	Note: The z-profile is only required for access point with electrical tray.
3	From the inside of the lift, insert the lower access point cover into the carrier so that it is flush with the front panel below the access point. <u>Standard:</u> Screw the cover onto both the left and right steps on the side using 2 pan head tapping screws DIN 7981 / ISO 7049-St4.8x13 and 5-mm galvanised contact washers (SP 2) (see Fig. 26 and Fig. 23 (installation direction of contact washers)). <u>Exception:</u> Type 1000 with guide rail or transporter: Screw on the cover on both the left and right rectangular tubes using 4 flat-head screws DIN 7500-1 PE M5x10 and 5-mm galvanised contact washers (SP 57) (see Fig. 26 and Fig. 23 (installation direction of contact washers)). If necessary to make an adjustment, loosen the pan head tapping screws DIN 7981 / ISO 7049-St3.9x9.5.	 Standard 5-mm galvanised contact washer Pan head tapping screw St4.8x13 Exception 5-mm galvanised contact washer Thread forming flat-head screw M5x10 Pan head tapping screw St3.9x9.5

Fig. 26: Installing the bottom access point cover

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

5.3.15 Route the cable of the safety light curtain and the height detection light barriers

Step	Task	Important note/illustration
		 Note There can be sporadic error messages due to incorrect cable routing! • Also follow the installation instructions "LICHTSCB-WERAC" (safety light curtain) and "HEIGHT" (height detection). • Follow the other supporting documents!
1	Route the safety light curtain cables through the cable guide to the front panel below the access point. From there, route the cables down to the cable bushings of the base terminal strip. Now route them to the inside of the lift through the cable bushing (see Section Y-Y, Fig. 27).	Note: • For special access point levels > 1500 mm (59.06 in): Route the cables through the cable bushing in the front panel below the access point to the electrical tray at the cover of the access point (see cable routing diagram CABLELL1). • If the sliding door is open, the sliding door weight must not touch any cables. • Lifts from production week 21/2008 or later are equipped with a safety light curtain in front of the access point as a personal safety device. • Lifts up to production week 20/2008 are equipped with safety light barriers in front of the access point as personal safety devices. Cable routing of the safety light barriers is to be taken from the Installation Instructions "Safety Light Barriers Lean-Lift" (LICHTSC5).
2	As shown in Section X-X (see Fig. 27), screw the cable duct for the cables of the height detection light barriers onto rectangular tube 1.2 using 4 thread forming countersunk screws DIN 7500-1 ME-M5x16 (SP 2). Route the cables of the transmitter array through the top access point cover to the receiver array, and route both cables through the cable duct (see Section X-X, Fig. 27) on rectangular tube 1.2 all the way down to the bottom frame.	Note: For special access point levels > 1500 mm (59.06 in), the cables are routed through a short cable duct to the lower access point cover. From there, they run directly below the lower access point cover to the bottom front panel and then to the electrical tray of the lower access point cover (see cable routing diagram CABLELL1 and Section X-X in Fig. 27).

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

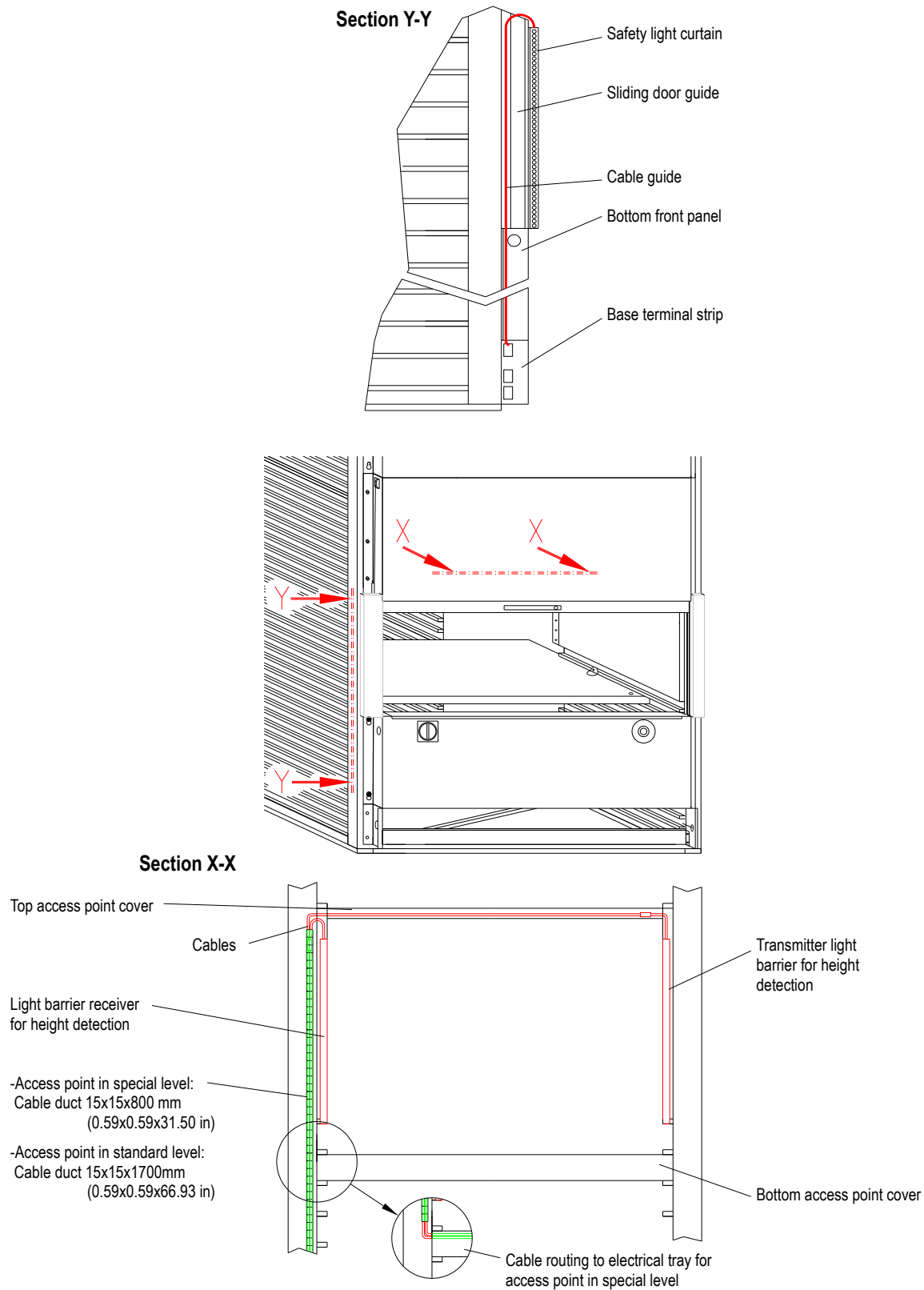


Fig. 27: Cable routing safety light curtain and height detection light barriers

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

5.3.16 Installing the keyboard, lighting panel and cable

Step	Task	Important note/illustration
		 Note - There can be sporadic error messages due to incorrect cable routing! - Follow the information in the supporting documents.
1	Screw the terminal box to side part 3 on the bottom of the step using pan head tapping screws DIN 7981 / ISO 7049-St4.8x13 (SP 4) (see Fig. 28).	
2	Install the keyboard mounting arm at the left or right at the access point (see order confirmation), on the rectangular tube of the corresponding side part. Use countersunk screws DIN 965 / ISO 7046-M8x20 - galvanised and microencapsulated (SP 3). Install the keyboard housing on the mounting arm according to the Installation Instructions "Mounting arm, key panel" (TAST).	  DANGER Risk of fatal injury from electric current! Check the fastening point of the protective earth cable of the lighting panel (toward the right of the panel, close to the switch). Paint/coating residue or missing contact washers can impair the function of the earth wires or even defeat it completely. For this purpose, also observe the installation instructions "BELEUCHT" and ensure the correct installation direction of the contact washers (see Fig. 23).
3	Attach the lighting panel to the sliding door panel, route the cable through the sliding door panel, through the side sliding door guide on the right and down to the base terminal strip through the cable bushing to the inside of the lift.	 Note - For multiple access points: follow the cable routing diagram CABLELL2. - For the version with lighting in the access point, observe the installation instructions "BELEUCHT".
4	If not pre-installed at the factory, install the proximity switches (nB 20, nB 21) in the access point cover as described in "Setting Instructions for Proximity Switches in Access Point and Extractor" (NSEINS).	 Note The proximity switches of the first access point are labelled with 1B20, 1B21 etc. The proximity switches of the second access point are labelled with 2B20, 2B21 etc.
5	After checking the substrate to ensure that it is free of dust and grease, route the proximity switch cable to the bottom front panel using adhesive clips, and from there sideways out of the bottom front panel to the base terminal strip and inside the lift through the cable bushing.	 Note For special access point levels > 1500 mm (59.06 in): After checking the substrate (free of dust and grease!), route the cable directly into the electrical tray of the access point using the adhesive clips. To do so, observe the cable routing diagram CABLELL2.

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

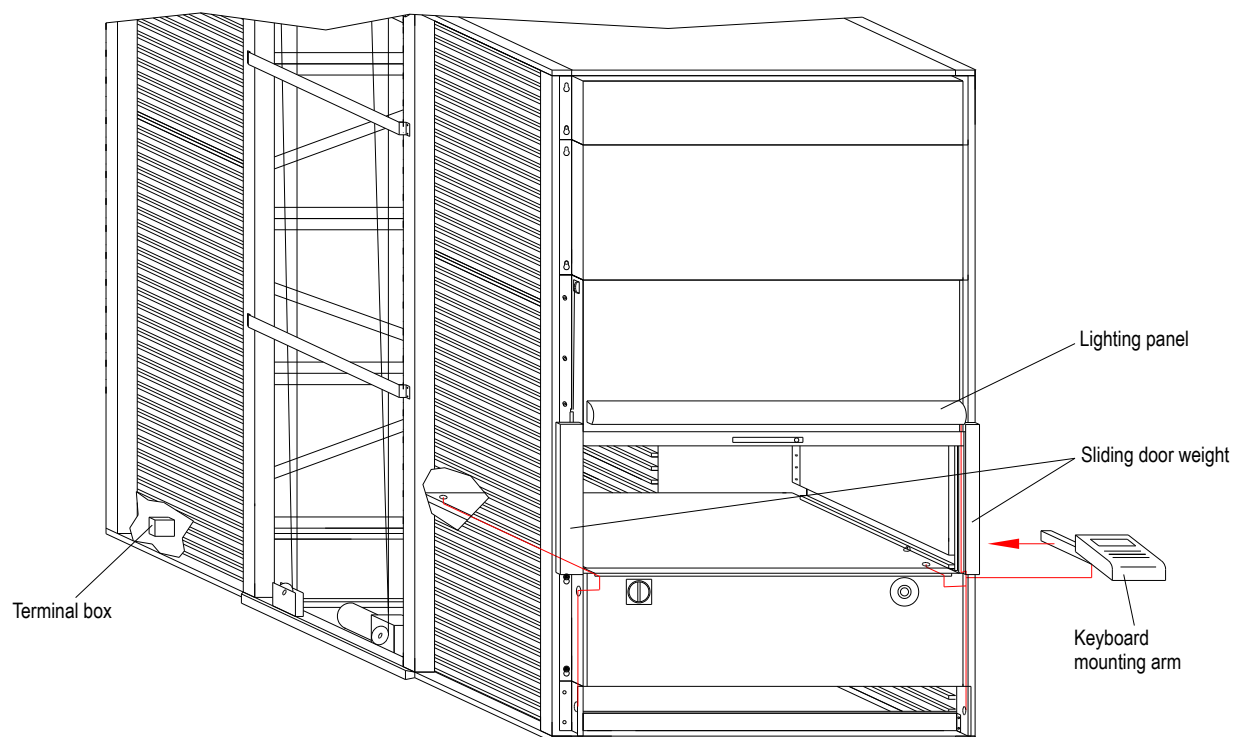


Fig. 28: Installing the terminal box, keyboard mounting arm and lighting panel

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

5.3.17 Installing the extractor

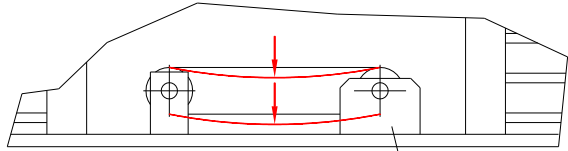
Step	Task	Important note/illustration
		Note: Install the vertical shaft for lift types with the type depths 1047 and 1270 and, if it was removed for installation reasons, also for type depths 635 and 825. To install the vertical shaft, follow the reverse order of steps as described in Chapter 5.3.2.
		 ! DANGER Danger from falling of the extractor When lifting the extractor and when working underneath it, the extractor must be secured from falling or crashing down. For more information, also refer to the detailed information in the operating manual (MANL-LL).
1	Attach 1 mounting bracket (WZ-20) for the extractor installation on each of the 4 rectangular tubes at a height of approx. 1.8 m (70.87 in) from the inside of the lift and secure each with a locking screw (see Fig. 30). For the screw tightening torque for the locking screw, refer to the riveted-on sign.	 Note If no mounting brackets are available: By manually inserting a container in the front and rear storage units, you create a support option for the extractor.
2	<u>Check the chain tension of the drive chains on the bottom frame</u> The chain must not be too taut or loose. To check the chain tension, push down the centre of the chain manually in the upper and lower strands at the same time. The deflection must be approx. 5 mm (0.2 in; see Fig. 29).	 Note Settling of the bottom frame under load can cause the chains to be come excessively taut. Therefore, check the chain tension again after the lift is loaded and correct it if necessary.
		SAFETY INSTRUCTIONS A chain that is too taut and/or askew can lead to excessive tensile stress and/or an insufficient alignment, causing an early failure of the chain and the drive.
3	<u>Correct the chain tension if necessary</u> Loosen the fastening screws of the bottom bearing blocks until the blocks can be moved. Vary the position of the bearing blocks until the required tension is reached. Re-tighten the screws.	 Setting the bearing block

Fig. 29: Correcting the chain tension

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

Step	Task	Important note/illustration
4	With the help of auxiliary personnel, pivot the extractor into the shaft and rest it on the mounting brackets.	 Note • Make sure to install the extractor in the correct direction. The outer proximity switches (B10, B11) and upper limit switch (S1) must be facing towards the service door. For more information, also see the installation instructions for "LL-SPIRA" and "LL-SCHLE". • For setting up lifts in multi-unit networks and versions with 2 ribbon cables, note the installation direction of the extractor according to the Installation Instructions for "Cable Carrier for Unit Height > 8.5 m (334.65")" (LL-SCHLE). Note: • To make it easier to swing the extractor into position, one drive chain can be removed. To do so, the corresponding bearing block must be detached and moved; see item 3. • To make it easier to swing the extractor into position, the lowest side brackets on the left and right can be removed.
5	Align the extractor with the carriers evenly on all sides using the adjusting screws of the 4 mounting brackets (see Fig. 30). The clearance between the extractor and the carriers must be equal at all 4 corners. The max. tolerance may not exceed ± 0.5 mm (0.02 in)! Here, also note the setting instructions "Extractor alignment" (LL-EXTJUS).	SAFETY INSTRUCTIONS Danger of substantial property damage from inaccurate alignment! • Carry out the work in an orderly fashion! • Carry out the check at all four corner points of the extractor.

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

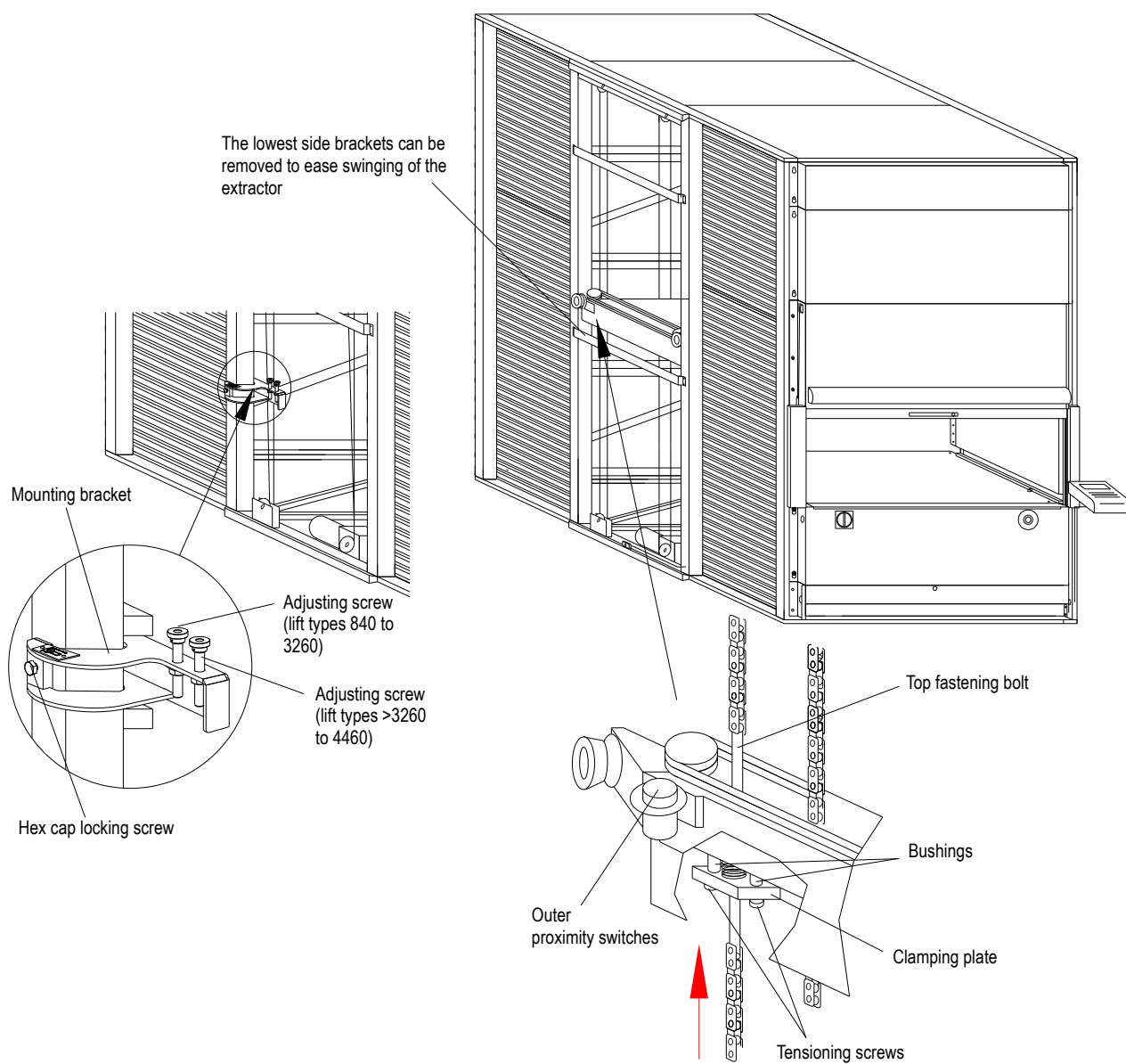


Fig. 30: Installing the mounting brackets and extractor

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

Step	Task	Important note/illustration
6	Unscrew the 2 tensioning screws DIN 912 / ISO 4762 of the chain tensioner: - Type 250: M8x50-12.9 - Types 500, 700 and 1000: M10x65-12.9 Fasten the four vertical chains to the top fastening bolts on the extractor using a chain joint.	 Note - Pay attention to the notes in the Installation Instructions "Chain Joint Installation" (99900004). - The mark on the four vertical chains must be on the same side of the extractor (top or bottom)!
7	Feed each carrying chain through the chain guide on the extractor to the corresponding bottom chain wheel. Pull the chains down manually and wrap each around the chain wheel.	SAFETY INSTRUCTIONS Danger of damage! Ensure that the four vertical chains are tensioned properly before fitting them on the lower chain wheel. - Displacement by a chain link will cause misalignment and damage. - Chains may not be twisted. Note: - If necessary, use auxiliary screws with a longer length for positioning on alternating sides until the original screws can be used. - After pretension force is applied, the auxiliary screws have to be replaced by the tensioning screws of strength class 12.9 provided at the factory.
8	Using a chain joint, fasten each chain end to the bottom fastening bolt of the extractor. Tighten the tensioning screws DIN 912 / ISO 4762 of the chain tensioner until the clamping plate is resting on the bushings (for type designations, see step 6).	
9	Turn back the adjusting screws of the mounting brackets and check the clearance of the extractor to the carriers; see Step 5. If the clearance from left to right is not equal: release the shaft clamping set (see Chapter 5.3.2) and adjust the clearance until it is correct by rotating the drive shaft (see Fig. 31). Afterwards, you must secure the shaft clamping set back in place.	

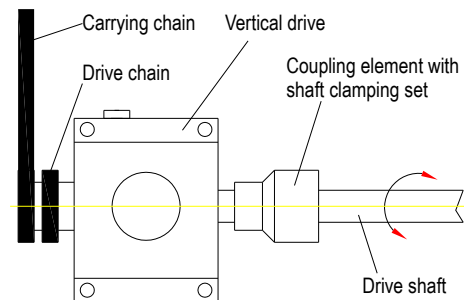


Fig. 31: Front side view of the vertical drive

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

5.3.18 Installing the electrical drawer

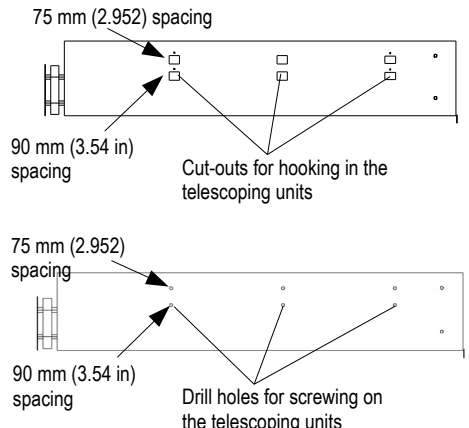
Step	Task	Important note/illustration
1	Container widths up to 1300 mm (51.18 in) Insert the panel for the electrical drawer into the stamped rail of the drawer and screw it into place on the side using cylinder screws DIN 912 / ISO 4762-M5x16, 5-mm galvanised contact washers, and hex nuts DIN 934 / ISO 4032-M5 (SP 5). Container widths over 1300 mm (51.18 in) Add an angle bracket to the right-hand side of the drawer to achieve the required width. Screw this angle bracket with the electrical drawer with 3 (> 2460: 6) cylinder screws DIN 912 / ISO 4762-M6x16 - galvanised - microencapsulated, washers DIN 125 / ISO 7089-6 and nuts DIN 934 / ISO 4032-M6 (SP 5). Insert the panel for the electrical drawer into the stamped rail of the drawer and screw this together with the angle bracket and electrical drawer using cylinder screws DIN 912 / ISO 4762-M5x16, 5-mm galvanised contact washers and hex nuts DIN 934 / ISO 4032-M5 (SP 5).	 ! DANGER Risk of fatal injury from electric current! Paint/coating residue or missing contact washers can impair the function of the earth conductor system or even defeat it completely. • Check whether there is paint/coating residue that has to be removed! • Make sure to install the contact washers in the correct direction (see Fig. 23). Note: • Since production week 21/2020, the telescoping units for lift types 840-825 to 1270 are screwed onto the electrical drawer. • Since production week 46/2006, the electrical drawer is made with telescoping units for hooking in. • From production week 11/2005 to production week 45/2006, screw-on telescoping units were used. • Until production week 10/2005: -ES lifts: Electrical drawer lies on top of the pattern of the steps -HS lifts: Electrical drawer with support brackets including tilt protection device
2	<u>Lift types 840-635 and 1300 to 3260-635 to 1270:</u> Hook the telescoping units into the electrical drawer/angle bracket according to the attached stickers for "L (= left)" and "R (= right)" (see Fig. 32 and 33). <u>Lift types 840-825 to 1270:</u> Install the telescoping units according to the installed stickers "L (= left)" and "R (= right)" on the corresponding side of the drawer. To do so, use 3 countersunk screws DIN 965 / ISO 7046-M5x16 with spring washers DIN 127-A5 and nuts DIN 934 / ISO 4032-M5 (SP 5) (see Fig. 32 and 33).	

Fig. 32: Electrical drawer

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

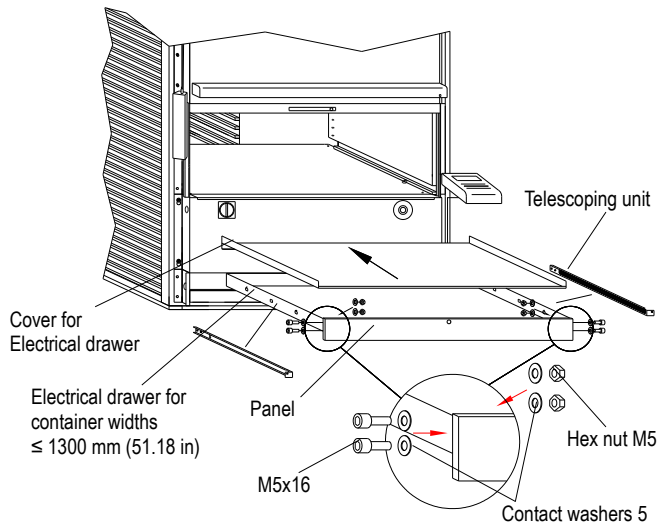
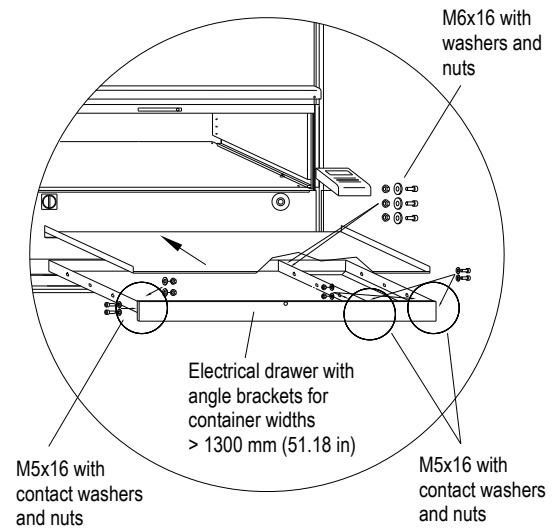


Fig. 33: Installing the electrical drawer



Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

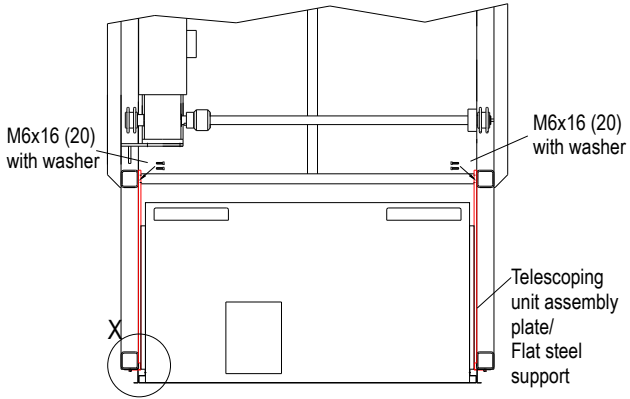
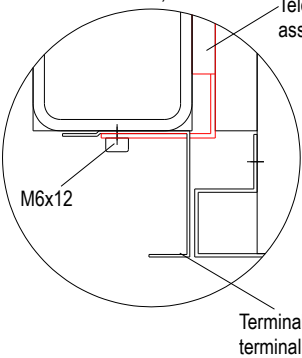
Step	Task	Important note/illustration
3	Push the electrical drawer into the grid of the steps from the front.	
4	a) Lift types 840-635 and 1300 to 3260-635 to 1270: Screw the plate attached to the telescoping units on the front of the lift together with the base terminal strip using galvanised cylinder screws DIN 912 / ISO 4762-M6x12 (SP 2) on the side part. On the inside of the lift, fasten the telescoping unit assembly plate to the side parts using cylinder screws DIN 912 / ISO 4762-M6x16 - galvanised - microencapsulated and washers DIN 125 / ISO 7089-6 (SP 5). Use one screw on each side for depth 635; use two screws on each side for depths 825 to 1270. b) Lift types 840-825 to 1270: On the inside of the lift, fasten the flat steel support on the side parts with socket head cap screws DIN 912 / ISO 4762-M6x20 and washers DIN 125 / ISO 7089-6 (SP 5). The screws must be secured with Loctite.	 Detail X (only lift types 840-635 and 1300 to 3260-635 to 1270)  Labels in Detail X: Telescoping unit assembly plate, M6x12, Terminal strip terminal strip

Fig. 34: Fastening the telescoping units

Note:

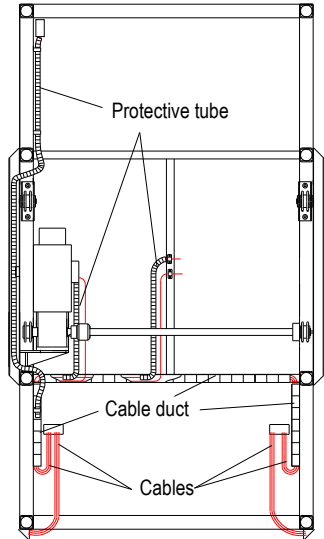
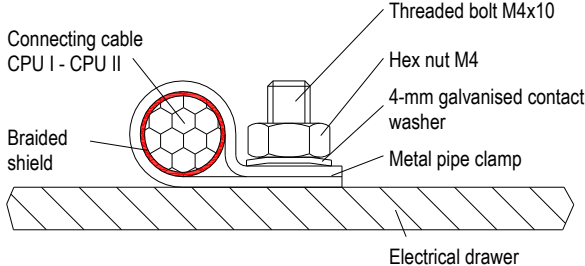
- For depth 635 it may be necessary to remove the washers 125 / ISO 7089-12 of the cross bracket under the electrical drawer.
- For lifts with MP100 switch [Q4] or MP subnet switch [Q4] and/or de-energising switch [Q5], refer to the installation instructions "LL-PanelQ".

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

5.3.19 Routing and connecting the cables

Step	Task	Important note/illustration
1	Route the cables according to the routing diagrams provided and install the cable ducts on the bottom frame of the lift as shown in the illustration to the right. When doing so, ensure the following: - The cables are stripped correctly before being screwed to the terminals and that each screw fitting holds the respective stripped conductor and that the earth wires are connected to the bolt (M4) in the wiring cabinet. - All power cables (mains power line, horizontal and vertical motor power lines) located in the base area of the extractor shaft are routed in the protective tube. - Depth 635: Cable retaining brackets are preinstalled on the underside of the electrical drawer ex works. Guide the cables through these retaining brackets and then into the drawer from the rear. This ensures that the cables are not damaged by the cross bracket.	 Fig. 35: Terminal box and cable ducts Note: - Alternatively, the protective tube for the mains power line can also be routed below or to the left of the vertical motor. - The cable ducts can be routed on or near the flat steel support of the base.
2	To shield the keyboard cable (connecting cable from CPU I - CPU II), fold back the shielding mesh over the outer jacket of the keyboard cable and place it in the electrical drawer according to the illustration to the right.	 Fig. 36: Shielding the keyboard cables Note Functional earthing for trouble-free operation. - Check whether there is paint/coating residue that has to be removed. - Make sure to install the contact washers in the correct direction (see Fig. 23).



Note

Functional earthing for trouble-free operation.

- Check whether there is paint/coating residue that has to be removed.
- Make sure to install the contact washers in the correct direction (see Fig. 23).

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

Step	Task	Important note/illustration
3	After you have finished routing the cables and making the electrical connections: insert the electrical drawer below the bottom front panel.	
4	Insert the cover of the electrical drawer above the drawer on the shaft side and hook it into the bottom front panel (see Fig. 33).	Note: If the electrical drawer is at a special height, you must insert the cable support plate in order to protect the cable • Standard electrical drawer: 2 • ECO-Drive electrical drawer: 3 Insert the carriers on the shaft side below the bottom plate of the electrical drawer and screw them into the step from above using 2 pan head tapping screws DIN 7981 / ISO 7049-St4.8x9.5 (SP 5). The cable support plate can be omitted if a cross bracket with stiffening plate is installed in the carrier directly below the electrical drawer. The cables must be secured on the stiffening plate.

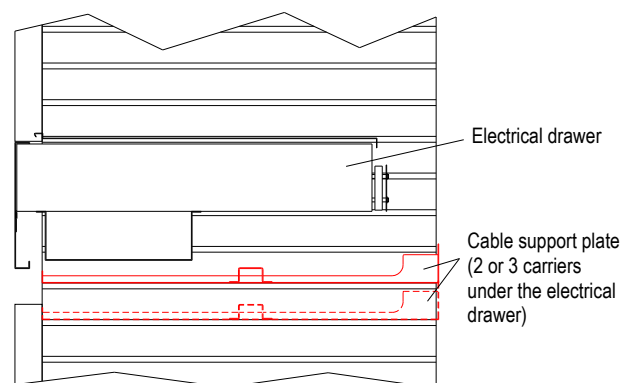


Fig. 37: Cable support plate below the electrical drawer

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

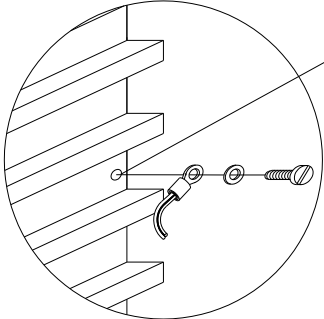
Step	Task	Important note/illustration
5	Before screwing on the protective earth cables, check the fastening point to ensure that it is free of paint/coating. Screw the protective earth cable of the protective earth terminal strip onto side part 2 at the rear of the 3rd step from the bottom using a brass slotted cheese head screw DIN 84 / ISO 1207-M6x12 and 6-mm galvanised contact washer (SP 6) (see illustration to the right).	

Fig. 38: Fastening point of the protective earth cable

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

5.3.20 Installing the lower limit switch and positioning sensors

Step	Task	Important note/illustration
1	As shown in Fig. 39, screw the lower limit switch [S 2] at the bottom left to rectangular tube 2.2 in on the step side at a height of 300 mm (11.81 in) using cylinder screws DIN 912 / ISO 4762 M6x16 galvanised - microencapsulated (SP 4). For lift types 840-825 to 1270 with socket head cap screws DIN 912 / ISO 4762-M6x20, galvanised (SP 5).	

Limit switch
lower

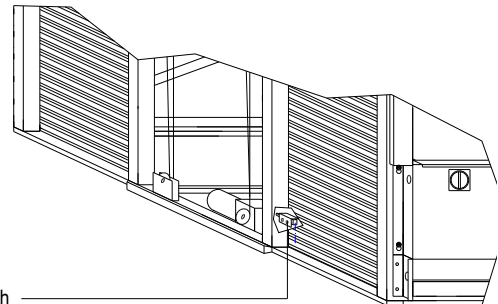


Fig. 39: Lower limit switch



Note

For the following lift versions, the limit switch is located on the right rear on rectangular tube 4.2 (see Fig. 40):

- ES: - type 700/ type 1000
(Height approx. 375 mm (14.76 in))
- lift depth 635: all lift types
(Height approx. 300 mm (11.81 in))
- HS: - all lift types
(Height approx. 375 mm (14.76 in))

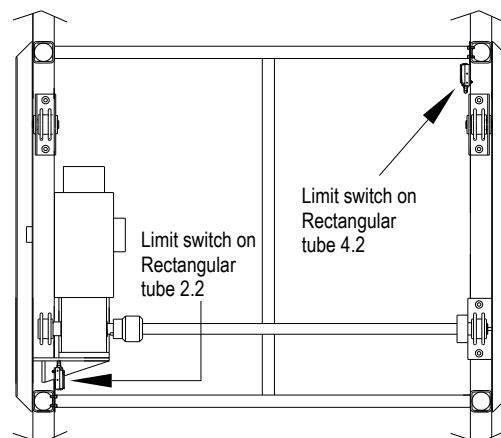


Fig. 40: Lower limit switch

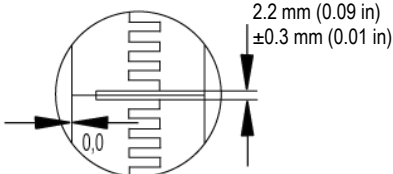
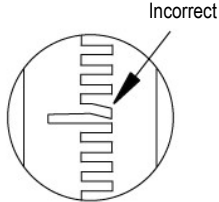
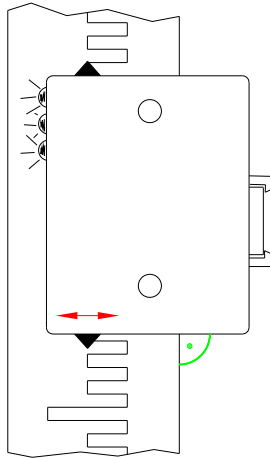
SAFETY INSTRUCTIONS

The limit switch [S2] must be set such that it is actuated whenever the extractor drives past it.

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

Step	Task	Important note/illustration
2	Screw the lowest slotted mounting bracket for positioning sensors onto rectangular tubes 2.2 and 4.2 (see Section 5.3.8).	Note There may be no offset at the joints of the slotted mounting brackets for positioning sensors. The slotted mounting brackets may not have any bent ridges or any dirt in the cut-outs. All fastening screws must be securely tightened.  Fig. 41: Max. tolerances of the joints  Fig. 42: Checking the brackets Note The positioning sensor has to be installed at a right angle and the fastening screws have to be attached securely. The positioning sensor must be adjusted to the centre of the positioning rail, and the alignment marks on the housing must be on the inside of the short slots.  Fig. 43: Setting the positioning sensor
3	Install the positioning sensor [S9-x] on the extractor. Proceed as described in the Installation Instructions "Positioning Sensor" (POSIEINS).	

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

5.3.21 Installing the proximity switch and upper limit switch on the extractor

Step	Task	Important note/illustration
1	Install the protection zone proximity switches (B18, B19) on the extractor as specified in the setting instructions "Proximity Switches in Access Point and Extractor" (NSEINS).	Note: The proximity switches (B18, B19) are preset on their mounts at the factory.
2	Check that the proximity switches on the extractor are set correctly according to the documents listed in Step 1.	
3	Install the upper limit stop limit switch [S1] on the extractor according to the Installation Instructions for "Limit Switch S1 Upper Limit Stop" [S1EIN].	Note: Pay attention to the installation of the limit switch S1 on the holding bracket as described in the Installation Instructions "Limit Switch S1 Upper Limit Stop" (S1EIN).

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

5.3.22 Install the extractor connection cable

How to install the extractor connection cable depends on the lift version.

A: Lift version with two spiral cables

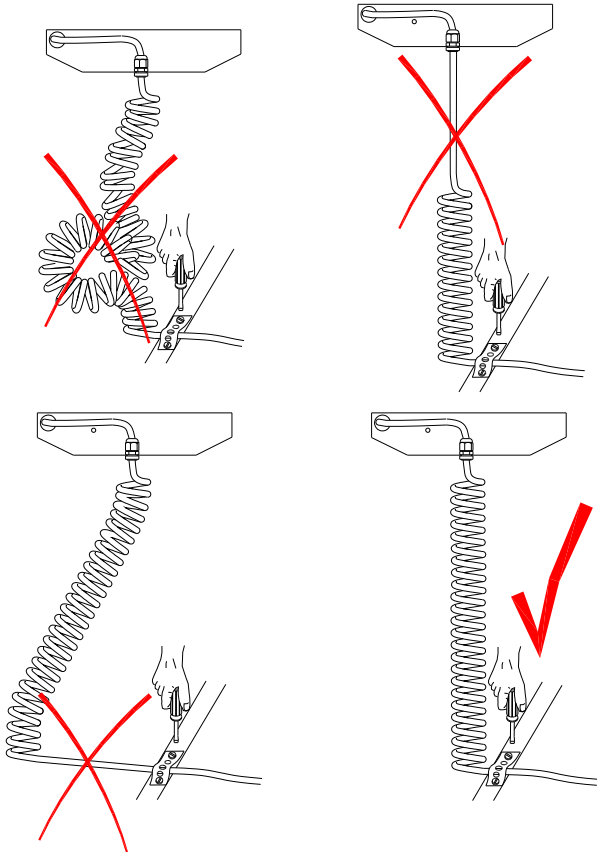
Step	Task	Important note/illustration
1	Screw the cables onto the longitudinal brace of the bottom frame using the clamp. Refer also the Installation Instructions for "Spiral Cable" (LL-SPIRA).	Note: Spiral cable for lifts with unit heights < 8.5 m (334.65 in). Note Check the cables. The cables must be suspended free of twists to prevent knots from forming. 

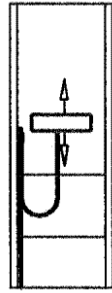
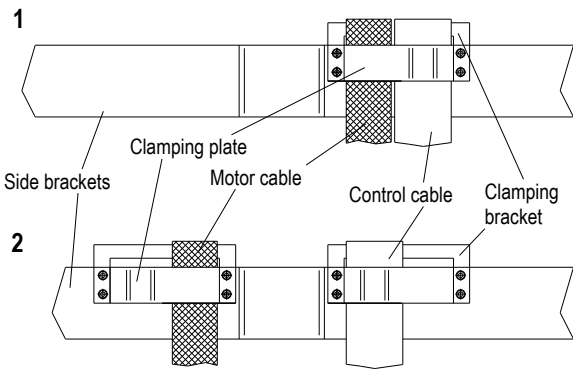
Fig. 44: Screwing the spiral cable onto the longitudinal brace

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

B: Lift version with two ribbon cables

Step	Task	Important note/illustration
		Note: Default ribbon cable for lifts with unit heights > 8.5 m (334.65 in) and upon customer request for lifts < 8.5 m (334.65 in).
		Note Check the cables. • The cables may not be twisted when installed. • The cables must not be too long in the bottom stop position, as otherwise they will be crushed. • The cables in the lowest and top stop positions must not be too short, as otherwise they will be stretched (pay attention to Installation Instructions "LL-SCHLE").
1	If not yet carried out in Chapter 5.3.9, install the side bracket for fastening both ribbon cables at the rectangular tubes at half of the lift height. Regarding the suspension side of the ribbon cables, observe the "Cable carrier for unit height > 8.5 m (334.65")" installation instructions (LL-SCHLE). Install the ribbon cables at the side bracket with clamping plate and clamping bracket (see small parts box KK). Also follow the Installation Instructions "Cable Carrier for Unit Height > 8.5 m (334.65 in)" (LL-SCHLE) and Fig. 45.	 The diagram shows a vertical lift shaft with a side bracket and a cable carrier installed at half the lift height.
	The figure to the right shows the motor and control cables routed through the clamping bracket with cable guard and clamped to the side bracket using clamping plates. Version 1: • ES lifts: Lift depths of 825 to 1270 • HS lifts: Lift depths of 1047 and 1270 Version 2: • ES lifts: Lift depth 635 • HS lifts: Lift depths of 635 and 825	Fig. 45: Ribbon cable scheme with individual lifts  The diagram shows two views of the cable attachment. View 1 shows the cables being routed through the clamping bracket with cable guard and clamped to the side bracket using clamping plates. View 2 shows the cables being routed through the clamping bracket with cable guard and clamped to the side bracket using clamping plates. Labels include: Side brackets, Clamping plate, Motor cable, Control cable, and Clamping bracket. Fig. 46: Attaching ribbon cables (view from inside)

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

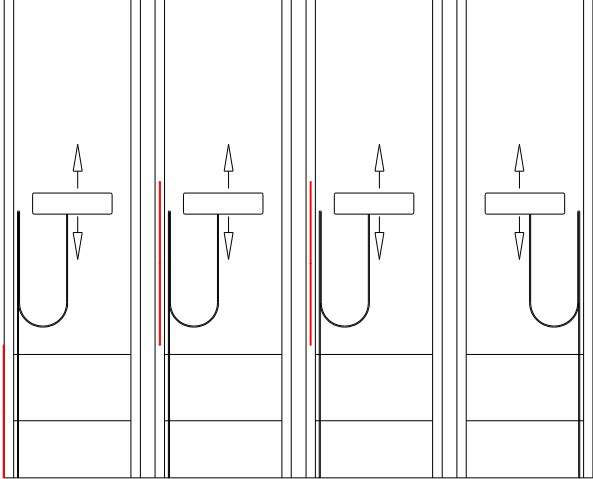
Step	Task	Important note/illustration
2	Install the ribbon cables for multiple immediately adjacent lifts (multi-unit network) according to the following scheme: • Install the ribbon cables of the outside lifts on the opposite outer sides. • For more than two lifts, the ribbon cables of the middle lifts must be installed such that each faces the direction of the service door (see Fig. 47). On each of these middle lifts (on the side on which the ribbon cable is fastened), install additional side panels up to one-half the height of the lift. The bottom passage up to a height of 1875 mm (73.82 in) remains free. • Also follow the Installation Instructions "Cable Carrier for Unit Height > 8.5 m (334.65 in)" (LL-SCHLE).	

Fig. 47: Example: Ribbon cable schema for multi-unit network with service door on the left or both sides

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

5.3.23 Installing the cable guard and shaft guard

A: With lift version with two spiral cables

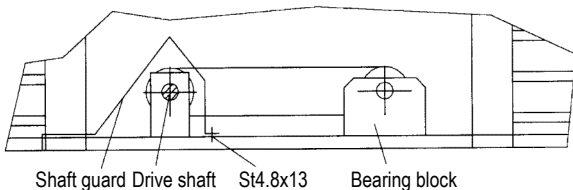
Step	Task	Important note/illustration
1	If not factory-installed: push the shaft guard over the drive shaft and the cross-member of the base and screw it to the centre crosspiece of the base using a pan head tapping screw DIN 7981 / ISO 7049-St4.8x13 (SP 4).	

Fig. 48: Shaft guard



Note

With lift widths 840 and 1300, for lift version with spiral cables, a cable guard is also required on both sides at the base (refer to Step B).

B: With lift versions with two ribbon cables

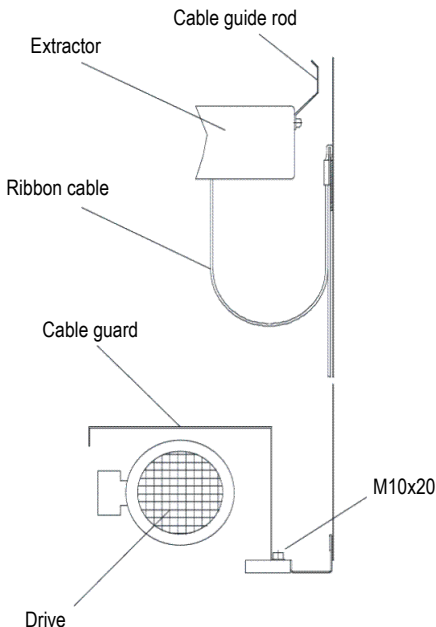
Step	Task	Important note/illustration
1	The cable guide rod on the extractor is factory installed. If not factory-installed: The cable guard has to be fastened over the drive with 2 socket head cap screws DIN 912 / ISO 4762-M10x20.	

Fig. 49: Cable guard



Note

At a lift width of 840, a cable guard is required on both sides on the base.

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

5.3.24 Shielding in the electrical drawer and on the extractor

Step	Task	Important note/illustration
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Note

- Functional earthing for trouble-free operation.
- Make sure to install the contact washers in the correct direction (see Fig. 23).

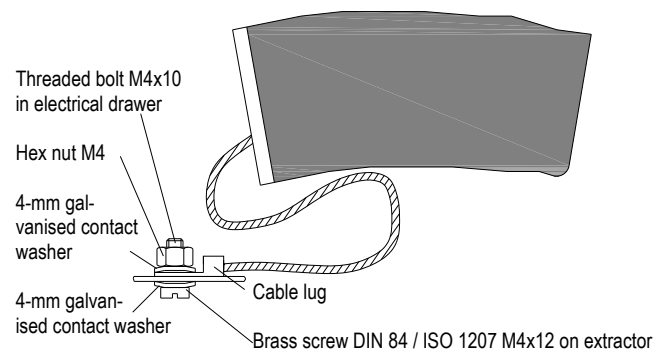


Fig. 50: Shielding in the electrical drawer and on the extractor with ribbon cable

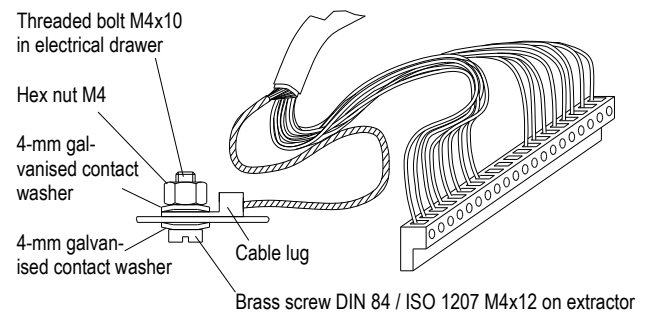


Fig. 51: Shielding in the electrical drawer and on the extractor with spiral cable

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

5.3.25 Installing side panels and service doors

Step	Task	Important note/illustration
1	Push the top strip of the side panel directly above the installation location for the service door into the upper bracket until the bottom strip of the side panel can be inserted into the lower bracket.	 Note A) Installation sequence Install the side panels from top to bottom. Begin on the service door side, with the side panel that is installed directly above the planned installation location of the door (see Fig. 52). B) Lift version with two ribbon cables To install the side panel directly on the bottom frame, the side panel <u>must</u> be used with the short bottom strip! C) Multi-unit network • If two or more lifts are immediately adjacent, the lifts are delivered to the sides of the lift standing together without side panels. This joint is covered on the outside using an additional panel (see Section 5.3.27). • If two lifts of varying heights are directly adjacent to one another, the joint panelling reaches up to the top frame of the shorter lift. On the taller lift, side panels must be installed from the top frame of the shorter lift in order to enclose the extractor shaft (see section 5.3.27). • For safeguarding two or more immediately adjacent lifts, refer to the installation instructions "LL-NEBEN2 and NEBEN3". Note: If the cross recessed pan head machine screws for securing the side panels at the very top are not accessible from the outside, the top side panels must be secured from the inside. To do so, drill out the top side bracket with the top side panels at d = 4.2 mm [0.17 in] (2x per side panel) and secure it in place from inside using pan head tapping screws DIN 7981 / ISO 7049-St4.8x13-F (SP 3).
2	Push the side panel down into the lower bracket as far as it will go.	
3	Follow the same procedure to insert the side panel above it. After installing the side panels at the very top (identifiable by the rectangular cut-outs), you have to secure them by tightening the tab washers with galvanised cross-recessed pan head machine screws M6x50 - TX30. To do so, you need to use the corresponding bit (see SP 3; if the bit is missing, it must be requested from the factory).	

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

Step	Task	Important note/illustration
4	Using flat-head screws DIN 7500-1PE M5x10 and 5-mm galvanised contact washers (SP 3), screw on and align each service door with hinges onto the rectangular tubes at the left and right. Tighten the fastening screws.	Note: - For a service door at special height, install this as described in the Installation Instructions "LL-SEC2". - For version with screw-on service door, it is inserted into the side bracket on the top side and screwed onto the underside at the U-rail of the base using pan head tapping screws DIN 7981 / ISO 7049-St4.8x13-F and 5-mm galvanised contact washers (SP 3). - Make sure to install the contact washers in the correct direction (see Fig. 23)
5	Using one-way security screws M4x8 (SP 4), mount the contact element for the service door switch on the bottom of the right service door wing (see Fig. 52).	Note: For a service door at special height, install the service door switch as described in the Installation Instructions "LL-SEC2".
6	Using fastening screws DIN 912/ISO 4762-M5x20, washers DIN 125/ISO 7089-5 and galvanised prevailing torque type hexagon nuts DIN 985/ISO 10511-M5 (SP 4), mount the service door switch on the left service door wing.	Note Adjust it such that the actuator latch fits into the service door switch without striking it.
7	Ensure that the sash lock for locking the service door opens and closes correctly. To do so, check the function of each lock using a screwdriver.	



Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

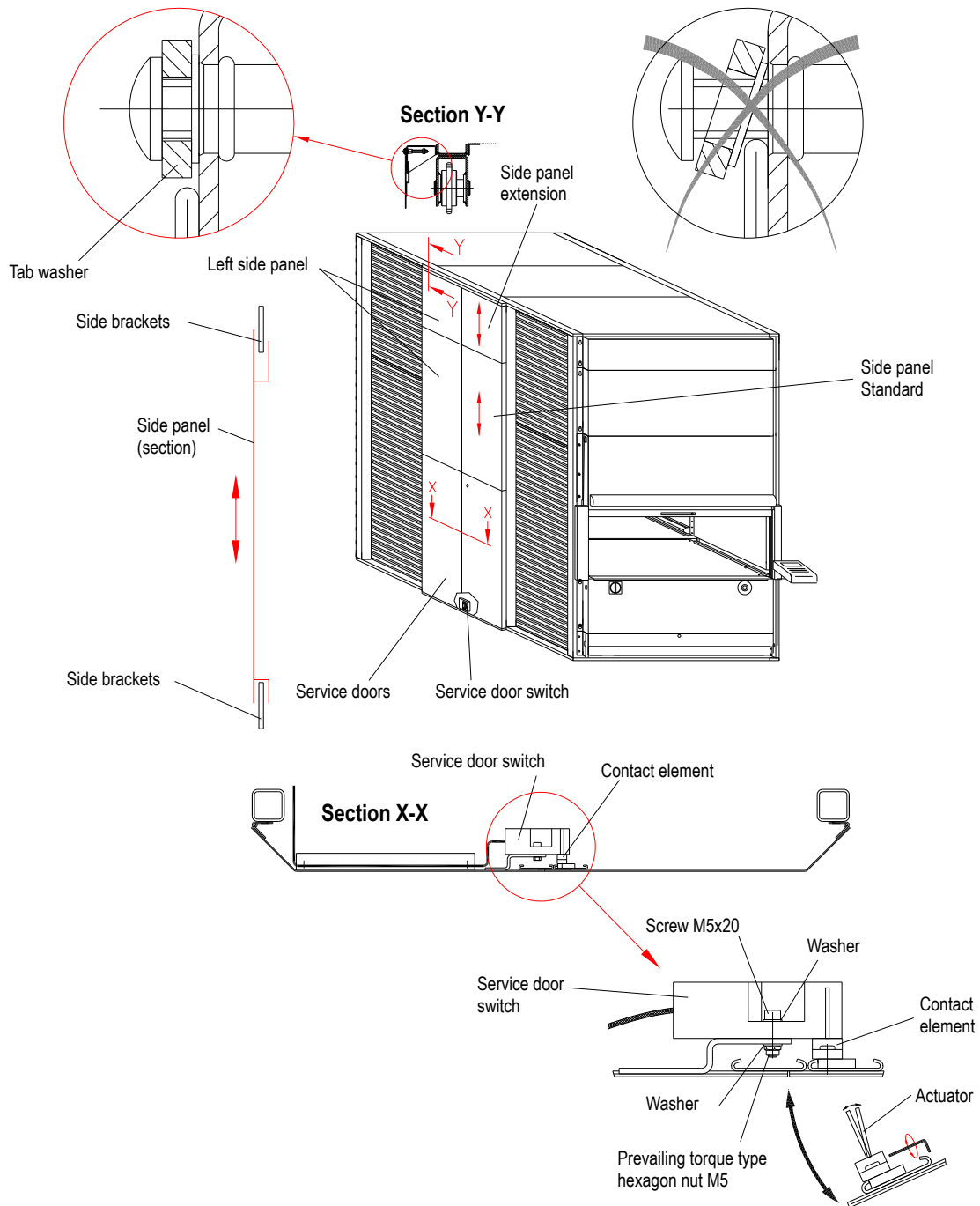


Fig. 52: Installing side panels and service doors

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

5.3.26 Installing the cover strips and attachments, inserting the locking device, cleaning the lift

A: Installing the cover strips

Step	Task	Important note/illustration
1	Attach the side cover strips to the left and right of the front side (see Fig. 53) and screw them onto the front panels and the sliding door panel using countersunk sheet-metal screws DIN 7982 / ISO 7050-St2.9x9.5 (SP1).	 Note Install the (plastic) cable bushing for the keyboard cable into the bottom cover strip. In doing so, follow the Installation Instructions for "Mounting arm, key panel" (TAST).

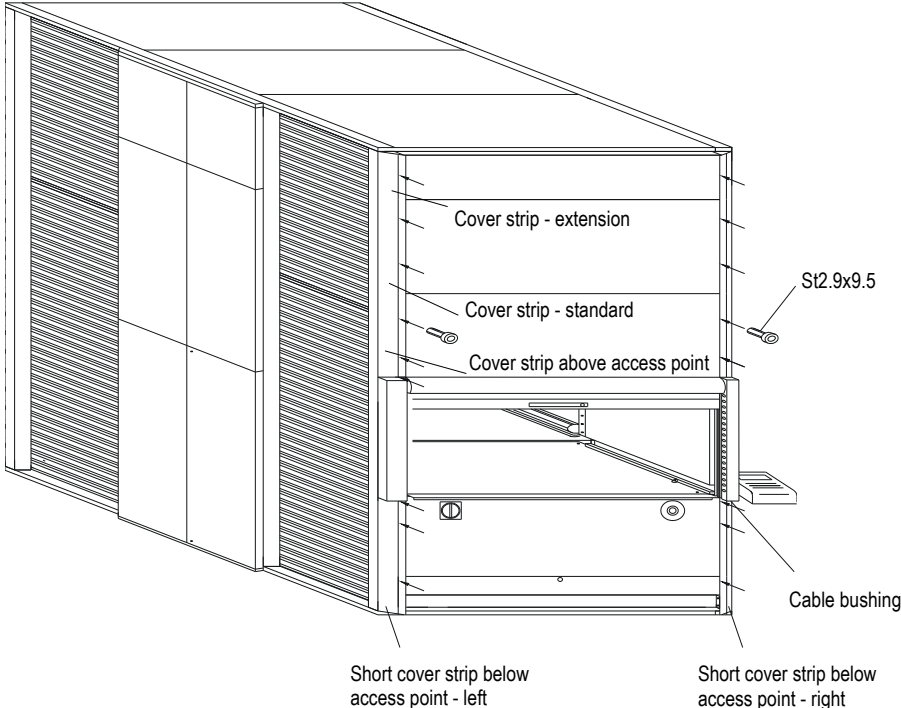


Fig. 53: Installing the cover strips

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

B: Storing the locking device

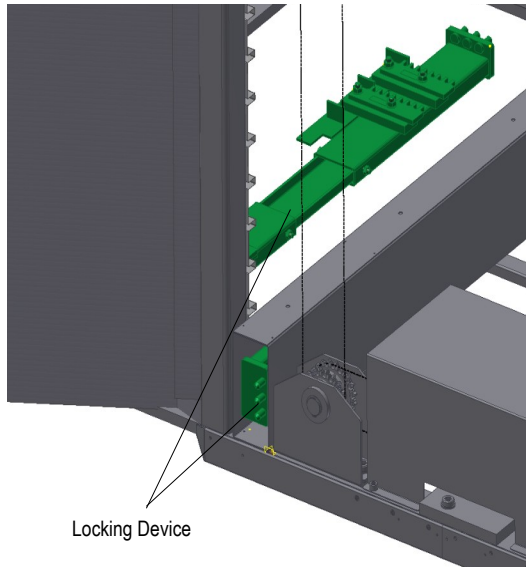
Step	Task	Important note/illustration
1	Place the separate storage container for the locking device right behind the service door onto the left bottom frame between the supporting tube and bearing block. Then push a locking device into this storage container. Then lay the second locking device flat onto the floor of the rear lift shaft.	 Locking Device

Fig. 54: Locking device storage

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

C: Installing attachments

The attachments are optional equipment. The installation of the attachments depends on the version of the lift.

C1: Rollers in the access point cover

Step	Task	Important note/illustration
		Note: The access point is equipped with rollers in the lower access point cover if one of the following is present: • Access point with guide rails • Access point with fold-down guide rails • Access point with transporter • Access point with container weighing device • Access point with automatic container ejector.
1	Use roller pairs (see small parts box KK) that correspond to the lift type (see type plate on the bottom front panel): Type 250: • All roller pairs with sliding bearings Type 500 and 700: • Second-last roller pair on the shaft side with roller bearings • All other roller pairs with ball bearings • <u>Exception:</u> Access point with container weighing device: All roller pairs with ball bearings Type 1000: • All roller pairs with double ball bearings Access point with automatic container extractor Type 250, 500, 700 or 1000: • All roller pairs with sliding bearings	Note: Electrostatically conductive rollers are grey (standard: light beige). For the number and arrangement, refer to the document "Instructions for Antistatic Version - ESTATIC1".

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

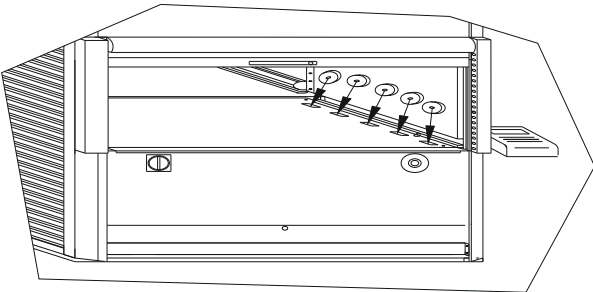
Step	Task	Important note/illustration
2	Install each roller in the cages of the access point cover, following the instructions in step 1.	

Fig. 55: Rollers in the access point cover

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

C2: Access point with guide rails

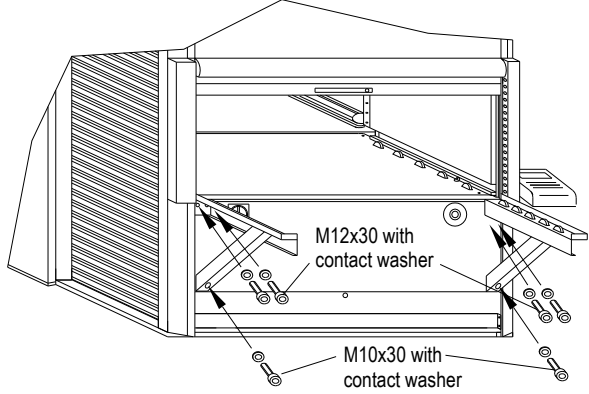
Step	Task	Important note/illustration
1	Screw the left and right guide rails into the mounting holes in the bottom front panel below the access point. Use 2 galvanised socket head cap screws DIN 912 / ISO 4762-M12x30 with 12-mm galvanised contact washers for each top guide rail fastener and use one galvanised socket head cap screw DIN 912 / ISO 4762-M10x30 with 10-mm galvanised contact washer (SP 22) for each lower fastener.	 Note - Check the angle accuracy of the guide rails using a container, and correct it if necessary by shimming the mounting plate. - For Lean-Lift types 700 and 1000, observe installation instructions "LL-AUFLAGE". - Each guide rail for lift types 700 and 1000 or lifts with a depth of 1047 or 1270, each rail has a support on the floor. - Make sure to install the contact washers in the correct direction (see Fig. 23). 
2	Use roller pairs (see small parts box KK) that correspond to the lift type (see type plate on the bottom front panel): Type 250: - All roller pairs with sliding bearings Type 500 and 700: - All roller pairs with ball bearings Type 1000: - All roller pairs with double ball bearings	Note: Electrostatically conductive rollers are grey (standard: light beige). For the number and arrangement, refer to the document "Instructions for Antistatic Version - ESTATIC1".
3	Insert each roller in the cages of the guide rails, following the instructions in step 2.	 Note The guide rails have to be installed so that a container can be transported evenly between the access point and guide rails. This can be adjusted using the long holes present in the guide rails. Adjust the hinged foot at the front support (if present) so that it is standing on the floor.

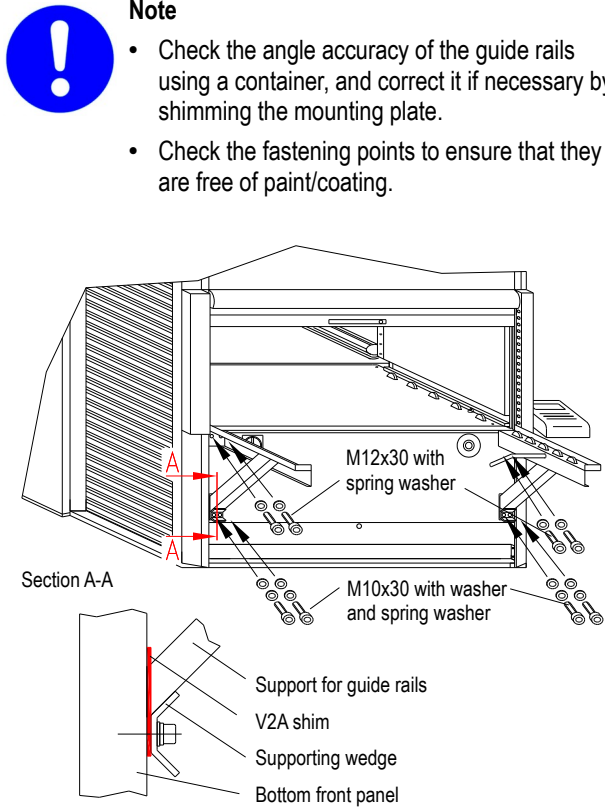
Fig. 56: Guide rails example

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

C3: Access point with fold-down guide rails

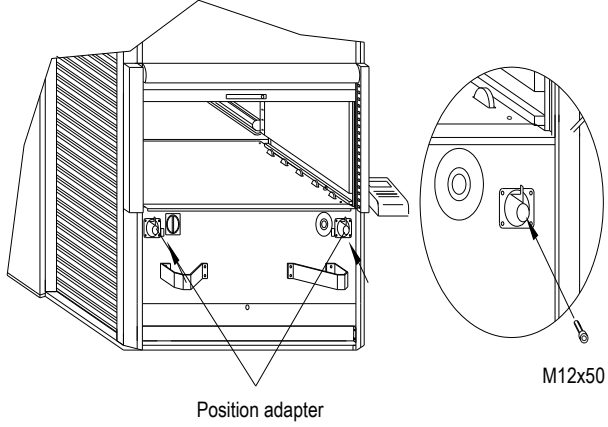
Step	Task	Important note/illustration
		Note: Fold-down guide rails only for Lean-Lift types 250 and 500.
1	Screw the left and right guide rails into the mounting holes in the bottom front panel below the access point. For each guide rail fastener, use 2 galvanised socket head cap screws DIN 912 / ISO 4762-M12x30 with spring washer DIN 127-A12 (SP 22).	Note - Check the angle accuracy of the guide rails using a container, and correct it if necessary by shimming the mounting plate. - Check the fastening points to ensure that they are free of paint/coating.  Fig. 57: Installing the fold-down guide rails
2	Fasten each supporting wedge (see small parts box KK) together with V2A shims (see small parts box KK) using 2 galvanised socket head cap screws DIN 912 / ISO 4762-M10x30 with washers DIN 125 / ISO 7089-10 and spring washers DIN 127-A10 (SP 22), while adjusting the incline of the guide rail attachment (see notes to the right).	Note The supporting wedges can be moved using the long holes, thus allowing the incline of the guide rail attachment to be changed. The V2A shims are to be installed between the bottom front panel and the supporting wedges (see Fig. 57).
3	Using a spirit level, check that the guide rails are horizontally level. Readjust it if necessary.	Note The guide rails have to be installed so that a container can be transported evenly between the access point and guide rails. This can be adjusted using the long holes present in the guide rails.

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

C4: Access point with transporter

Step	Task	Important note/illustration
1	Screw the transporter centring mandrel(see small parts box KK) to the bottom front panel from the inside using cylinder screws DIN 912 / ISO 4762-M12x50 (SP 23) and secure it from turning using spring pins DIN 1481-5x24. Additionally for a lift with: -Transporter and LED -Transporter and light curtain barrier -Transporter with light curtain barrier and LED Two more position adapters must be screwed onto the bottom front panel. To do so, use the provided galvanised socket head cap screws DIN 912 / ISO 4762-M8x20 and hex nuts DIN 982 / ISO 7040-M8 (SP 23).	 Position adapter M12x50 Fig. 58: Centring mandrel of the transporter
2	Use roller pairs (see small parts box KK) that correspond to the lift type (see type plate on the bottom front panel): Type 250: • All roller pairs with sliding bearings Type 500 and 700: • All roller pairs with ball bearings Type 1000: • All roller pairs with double ball bearings	
3	Insert each roller in the cages of the transporter, following the instructions in step 2.	
4	Align the transporter: Bring the transporter to the correct level by adjusting the height of the rolling rollers and centre it on the transporter centring mandrel. Latch the locking mechanism to the front panel.	Note If 2 or more lifts are operated with a transporter, make sure that the access point level of the lifts from the installation surface is equal to the top edge of the bottom front panel (tolerance ± 1.5 mm (0.06 in)).

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

D: Cleaning after installation

Step	Task	Important note/illustration
1	Check the cleanliness of the inside of the lift and installation area: • Remove any dirt resulting from installation. • Remove any foil, film, adhesive tape or other packaging material. • Pick up any screws that have fallen to the ground. • Wipe up any grease contamination.	Note: • Dirt and foreign material can impair the function of the lift. • A vacuum cleaner can be used here if necessary.

E: Additional options

For other attachments / lift options, please observe overview list "LL-ALLEB_" listed in "Chapter 1, supporting documents".

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

5.3.27 Installing the panelling between the lifts

Step	Task	Important note/illustration
		Note: - If two or more lifts are directly adjacent, the joints are covered by additional panelling on the outside. For varying lift heights, the additional panelling of the joint reaches up to the top frame of the lower lift (see Fig. 59). - For two-part or multiple-part lift side parts, the lifts must be fastened to one another on the shaft side or wall side at the joints using one connecting brace for each. In addition, also note Section 5.3.4 and Fig. 59. The following applies: 1) For joints at the same height, the lifts are connected at <u>all</u> joints to the flat joint of both lifts using two DIN 912 / ISO 4762-M12x30 galvanised socket head cap screws and DIN 125 / ISO 7089-12 (SP 3) washers. 2) For joints at different heights, the lifts are connected to the flat joint of one lift using a DIN 912 / ISO 4762-M12x30 galvanised socket head cap screw and DIN 125 / ISO 7089-12 (SP 3) washer and to the supporting tube of another lift with a DIN 912 / ISO 4762-M10x25 socket head cap screw and DIN 125 / ISO 7089-10 washer. 2a) When expanding a single existing lift to form a multi-unit network or adding a new lift to an existing multi-unit network, the lifts are connected at the height of the <u>joints of the existing lift</u>. 2b) When expanding a single existing lift to form a multi-unit network or adding a new lift to an existing lift, the lifts are connected at the height of the joints of the lift with the small number of joints. In this case, the M10 thread screw(s) must be drilled into the supporting tube. The distance between the rectangular tubes must be complied with.

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

Step	Task	Important note/illustration
1	On each first (left) lift, install the front and rear panelling on the front and rear panels on the screws of the side parts (DIN 912 / ISO 4762-M10x20, SP 1) in the same way as the panels were mounted (see Section 5.3.8 or 5.3.11).	 Note - The distance between the two rectangular tubes for the immediately adjacent lifts is: - standard: dimension X = 137 mm (5.39 in) - optional for unit heights < 8.5 m (334.65 in) (see order confirmation): dimension X = 117 mm (4.61 in) - automatic container extractor, version 1 (side roller cover): dimension X = 170 mm (6.69 in) - automatic container extractor, version 2 (revolving safety light curtain): dimension X = 317 mm (12.48 in) - Special distance (see order confirmation) - If an individual lift is expanded into a multi-unit network, the panelling is screwed on at the new lift with the front and rear panels. - The following applies to lifts with two or more access points where the access points are at the same access point level and have the same access opening: If two or more lifts are immediately adjacent, the panelling is secured to the lift that has more access points.
2	For each adjacent lift, the panelling is then fitted in below the front or rear panel. See Section 5.3.8 or 5.3.11.	
3	In the access area, the pieces of panelling are screwed to each other using cross recessed pan head sheet-metal screws DIN 7981 / ISO 7049-St2.9x6.5 (SP 3).	
4	Optional: Panelling of the top frames (only possible for identical lift heights) Place one piece of panelling on the top frame of each lift as a cover plate.	
		Note: For lift depths of 1047 (41.22 in) and 1270 (50 in), the cover plate has a 2-piece design. Before installing the cover plate, both halves have to be screwed together using 2 flat-head screws DIN 7985 / ISO 7045-M5x10 and nuts DIN 934 / ISO 4032-M5 (SP 49).

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

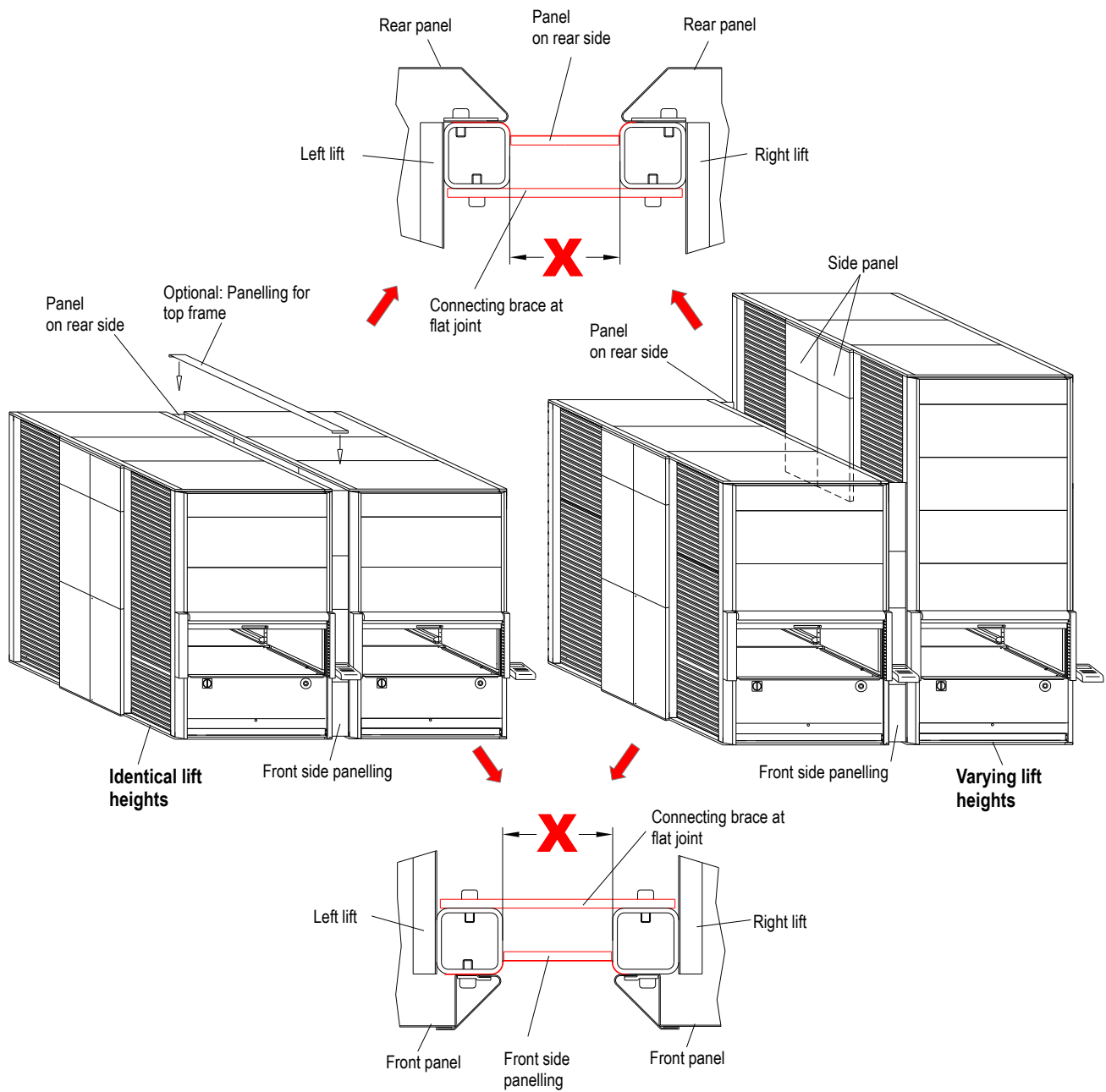


Fig. 59: Mounting the panelling, cross-section: Rectangular tubes/side parts of immediately adjacent lifts

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

5.3.28 Checking the earth wire and insulation resistance

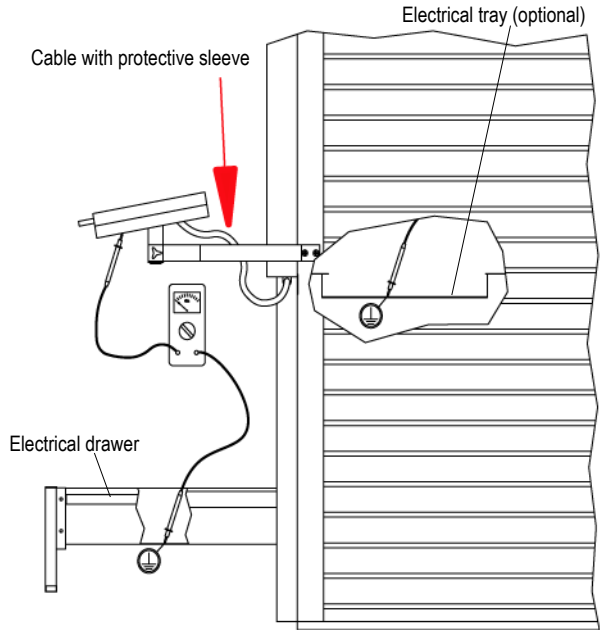
Step	Task	Important note/illustration
1	Conduct the earth wire resistance test according to item 2.1a) "Earth wire resistance" of the Safety inspection log "F-SichB3" (refer to Fig. 60).	 ⚠ DANGER Risk of fatal injury from electric current! The reliable function of the earth wire must be guaranteed at all times. Note: The central earthing point is the top-hat rail of terminal strip X1.0 in the electrical drawer. 
2	Measure the earth wire resistance between the earthing point in the electrical drawer (first access point) / electrical tray (each additional access point) at the measuring points: • Key panel • Bottom front panel (near the main switch) • At the earthing bolt of the lighting or, for lighting in the access point, on the fastening screw • Side parts • At all drives. For additional measuring points, see Safety inspection log "F-SichB3".	
3	Conduct the insulation resistance check according to item 2.1b) "Insulation resistance" of the Safety inspection log "F-SichB3".	

Fig. 60: Checking the function of the earth wire

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

5.3.29 Routing and connecting the mains power supply cable

Step	Task	Important note/illustration	
1	The standard version has a cable entry point for the mains power line provided by owner/operator with a separate earth wire at ground level, on the left on the rear side of the lift. Different cable entry point: see order confirmation.		 DANGER Risk of fatal injury from electric current! The mains power supply connection in the lift may be routed only with supervision of the installer by an in-house electrician employed by the owner/operator.
2	The installer must ensure on-site that the mains power supply cable is de-energised, earthed and short-circuited.		SAFETY INSTRUCTIONS The installer is obligated to ensure that the electrically skilled person carries out the tasks listed here completely, carefully and thoroughly.
3	The locking screw of the mains power line must be removed or the miniature circuit breaker must be switched off and secured from being switched on again.		Note This work must be carried out by the owner/operator. Hänel employees are not entitled to do this for workplace safety and liability reasons. Observe: A shutoff device (WZ-67) for the miniature circuit breaker is available from Hänel.
4	The cable end of the mains power line must have been earthed and short-circuited using the "WIRE-NUT" (SP 5).		Note This work must be carried out by the owner/operator. Hänel employees are not entitled to do this for workplace safety and liability reasons. Observe: The "WIRE-NUT" (WZ-65) is available from Hänel.
5	The cables are routed from below through the open triangle in the rear panel and from there to the power terminal box located right next to the cable entry point on side part 3 (see Chapter 5.3.16).		Note This work must be carried out by the owner/operator. Hänel employees are not entitled to do this for workplace safety and liability reasons.
6	Connect the mains power supply cable and separate earth wire. The mains power supply cable must be connected last.		 DANGER Risk of fatal injury from electric current! The mains power supply connection in the lift may be connected only with supervision of the installer by an in-house electrician employed by the owner/operator. Note Before the lift is connected to the mains power supply by the owner/operator, you must ensure the following: • The mains supply voltage provided by the owner/operator matches the data on the type plate • The main switch is switched off.

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

5.3.30 Starting up the lift

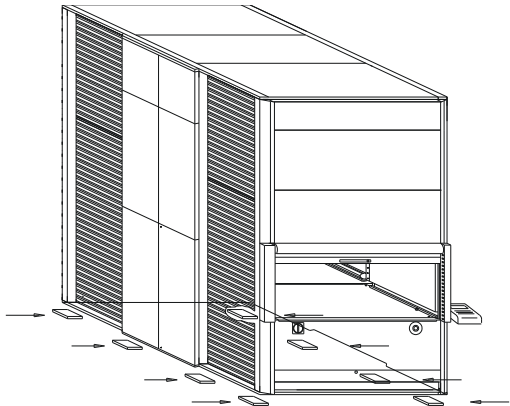
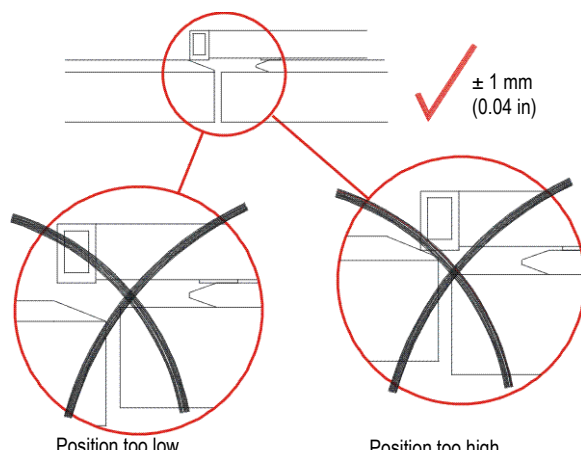
Step	Task	Important note/illustration
		 Note If anchoring / floor anchoring / a floor anchorage system for the lift on an intermediate floor / a platform / a pedestal must be provided by the owner/operator at the top of the building or on the floor (see type plate and order confirmation), the owner/operator must install this before commissioning the lift.
1	Remove the 4 mounting brackets for extractor installation on the rectangular tubes (refer to Chapter 5.3.17).	
2	Check that main switch Q2, the protective motor switch (if present) and all miniature circuit breakers are switched off. If this is not the case, these must be switched off.	
3	Use a voltage measurement to check the mains supply voltage in the electrical drawer at terminal strip X1.0, terminals 1-5. For mains supply voltage ≥ 500 V (in accordance with type plate) at terminal strip X0.1, terminals 1-5.	 Note The mains supply voltage for all 3 phases (L1-L2, L2-L3, L1-L3) has to be measured and compared to the specification on the type plate. Starting up the lift if there are deviations $> 5\%$ is not permitted without first consulting the manufacturer.
4	Only for lifts in multi-unit networks Switch on residual-current circuit breaker F19.	Note: The residual-current circuit breaker is in only one lift of the entire multi-unit network.
5	If the lift is in a multi-unit network, check that the main switch of the lift cannot be switched on if a service door is open!	
6	Close and lock the service door(n) of the lift or multi-unit network.	
7	Switch on main switch Q2, all miniature circuit breakers as well as the protective motor switch (if present) in the electrical drawer.	
8	Carry out a measurement to check the secondary-side control voltage 24 V AC of control transformer T1 and the corresponding voltage of all optional supplementary features, including the lighting on terminal strip X3 or the power socket or the Vario-Arm on terminal strip X4.	
9	Initialise the lift control system according to the technical description of the microprocessor control system.	 Note Check the protective field using the provided test bar. Refer also to the document "Installation Instructions for Safety Light Curtain".

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

5 Installation (continued)

5.3.31 Checking the extractor holding position

Step	Task	Important note/illustration
		Note After completing the installation and starting up the lift, you must check the extractor holding position.
		SAFETY INSTRUCTIONS Danger of substantial property damage or malfunctions from inaccurate alignment! Carry out the work in an orderly fashion!
1	Check the alignment of the bottom frame using a spirit level: the bottom frame must be absolutely level.	
2	Check the rectangular tubes: the frame must be resting completely on the ground below all 8 vertical rectangular tubes. Any shims present must be immovable.	
3	Check the tolerance of the vertical extractor holding position at the access point(s) at carrier level height of the step at all 4 side parts: it may not be more than ± 1 mm (0.04 in).	Fig. 61: Checking the alignment of the bottom frame  Position too low Position too high
4	If you have found inaccuracies in steps 1 to 3, these must be corrected by realignment so that proper extractor positioning is guaranteed.	Fig. 62: Tolerance of the vertical stop position ⚠ DANGER Substantial risk of injury when working inside the lift! The safety instructions as described in Chapter 3 must be followed if you need to enter the lift.



Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

6 Accepting the Lean-Lift

6.1 Carry out a safety inspection

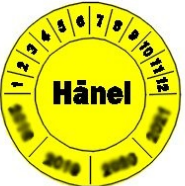
Step	Task	Important note/illustration
1	As part of the acceptance of the completely assembled Lean-Lift, carry out a safety check using the checklist in the document "F-SICHB3".	
2	Check the safety signs using the "Checklist for Safety Signs" in the document "SiSchi-LL". Return the completed document to the installation supervisors.	
3	Fill the lift with the supplied containers through an access opening.	
4	Provide the customer with an introduction to operating the lift based on the operating manual and user guide and point out to them the necessary safety regulations and technical operating instructions.	
5	Affix the inspection sticker for the respective country (see Fig. 63) with the next test date noted, at the following locations: The sticker must be attached to the side panel on the right in the access point on the "Brief operating instructions" sign. When there are multiple access points, the sticker is attached to the first access point only.	 Inspection sticker (worldwide)  Inspection sticker (Germany, Switzerland, the Netherlands)

Fig. 63: Inspection sticker

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

7

Disposal instructions

Contents

This chapter provides information about disposing of the packaging material and the decommissioned lift. It also provides information about the materials used in the construction of the lift.

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Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

7 Disposal instructions (continued)

7.1 Disposing of the packaging material

The packaging material is composed of the following recyclable materials:

- Wood (untreated)
- Corrugated cardboard/cardboard/paper
- Polyethylene film (transparent)
- Tightening straps: Polypropylene (black)

When disposing of the unit, follow the locally applicable laws and regulations of the country of use.

In Germany, the packaging can be given to your local recycling centre.

You can obtain their addresses from your local government.



Dispose of the packaging material in an environmentally responsible manner. Our units require effective packaging to protect them during transport. However, we use only as much as absolutely necessary.

7.2 Disposing of the decommissioned lift

Before being disassembled, the decommissioned lift must be completely unloaded and, after removing all containers, disconnected from the mains power supply by the owner/operator. The decommissioned lift must be disassembled in the reverse logical order to that described in these Installation Instructions.

SAFETY INSTRUCTIONS

Danger of injuries if instructions are not followed!

The safety instructions of these Installation Instructions and the Lean-Lift operating manual must be followed at all times!



When disposing of the unit, follow the locally applicable laws and regulations of the country of use. In Germany, you can give the used parts to a recycling centre or vehicle or scrap recycling facility. You can obtain their addresses from your local government. If you have specific questions about the proper disposal of the parts, please contact your local environmental officer or the Hänel factory.

Note the list of materials(see the following page).

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

7 Disposal instructions (continued)

7.3 Materials

Material	Use	Note
Steel	• Frame, cross brackets etc. • Screws • Various connecting elements • Chains	
Sheet steel	• Housing • Panelling	
Copper	• Cables	
Plastic, rubber, PVC	• Cables • Seals • Rollers	
Batteries, NiCd/Li batteries	• Control system	
LCD displays	• Control system • Indicator	 WARNING Danger from toxic substances! LCD displays contain highly toxic fluids.
Electronic scrap	• Electrical supply • Control units • Boards with electronic components • Light barriers	

Installation Instructions

Hänel Lean-Lift - lift types 840 to 3260

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